United States

Circuit Court of Appeals

For the Ninth Circuit.

Transcript of Record.

(IN THREE VOLUMES.)

WILSON AND WILLARD MANUFACTURING COMPANY and ELIHU C. WILSON,
Appellants,

vs.

ROBERT E. BOLE and EDWARD DOUBLE,
Appellees.

VOLUME I. (Pages 1 to 320, Inclusive.)

Upon Appeal from the United States District Court for the Southern District of California,

Southern Division.

SEP 2.8 1915

F. D. Monckton,



United States

Circuit Court of Appeals

For the Ninth Circuit.

Transcript of Record.

(IN THREE VOLUMES.)

WILSON AND WILLARD MANUFACTURING COMPANY and ELIHU C. WILSON,

Appellants,

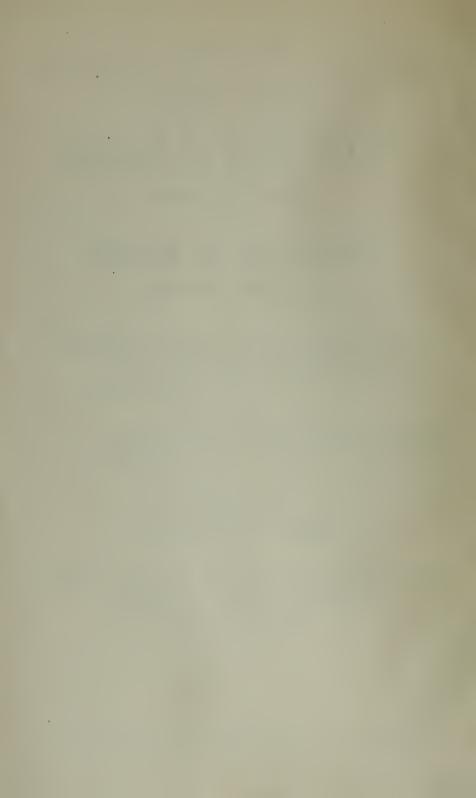
VS.

ROBERT E. BOLE and EDWARD DOUBLE,

Appellees.

VOLUME I.
(Pages 1 to 320, Inclusive.)

Upon Appeal from the United States District Court for the Southern District of California, Southern Division.



INDEX TO THE PRINTED TRANSCRIPT OF RECORD.

[Clerk's Note: When deemed likely to be of an important n errors or doubtful matters appearing in the original certified recor printed literally in italic; and, likewise, cancelled matter appearing the original certified record is printed and cancelled herein a lingly. When possible, an omission from the text is indicate printing in italic the two words between which the omission to occur. Title heads inserted by the Clerk are enclosed where the control of the contro	d are ng in ccord-
I	Page
Affidavit of Raymond Ives Blakeslee, Solicitor	
and Counsel for Defendants	36
Amended and Substituted Answer	13
Assignments of Error	884
Attorneys, Names and Addresses of	1
Bill of Complaint	3
Bond on Appeal	
Certificate to Transcript on Appeal	900
Citation	1
DEPOSITIONS ON BEHALF OF PLAIN-	
TIFFS:	
BOLE, ROBERT E	583
Redirect Examination	605
Recross-examination	609
HEBER, ROY L	712
EXHIBITS:	
Complainants' Exhibit "A"—Letters Pat-	
ent No. 1,080,135, Issued to Robert E.	
Bole	733
Complainants' Exhibit "B"—Letters Pat-	
ent No. 827,595, Issued to E. C. Wilson	738
Complainants' Exhibit "C," Sketch of Key	
Made by Bole	745

Index.	Page
EXHIBITS—Continued:	
Complainants' Exhibit "D"—Postal Card	l,
Bole's Exhibit, Bole-Heber Postal Car	
Complainants' Exhibit "E"—Sketch of	n
Linen, "Bole's Exhibit, January 27	7,
1911, Sketch''	
Complainants' Exhibit "F"—Reproductio	n
Sketch of Key, Bole's Exhibit, Repre	
duction of 1908 Sunset-Monarch Orde	\mathbf{r}
Sketches	
Complainants' Exhibit "H"—Reproductio	n
Sketch of Gib-key, Made by Witnes	
Adams	. 752
Complainants' Exhibit "I"—Certified Cop	y
Records of Patent Office, Reasons of	f
Appeal and Notice of Hearing Wilso	
vs. Bole	
Defendants' Exhibit—Bole's Exhibit, Wi	
son Cross-examination Exhibit No.	•
Shop Order, Wilson & Willard Manu	
facturing Co. to Kern Trading & O	
	. 792
Defendants' Exhibit — Bole's Exhibit	
Cross-examination Exhibit No. 3, Sho	_
Order, Wilson & Willard Manufactu	
ing Company to Norbeck & Nicholso	
Co	
Defendants' Exhibit—Bole's Exhibit, V	
W. Wilson Cross-Examination Exhib	-
1 for Identification, Agreement Betwe	
Robert E. Bole Pump Company ar	ıd

Index.	Page
EXHIBITS—Continued:	
Wilson & Willard Manufacturing Com-	
pany	773
Complainants' Exhibit—Sketch Offered in	
Connection with Deposition of Roy L	
Heber	
Defendants' Exhibit—Wilson Exhibit, Bole	
Letter of January 17, 1913	
Defendants' Exhibit—Wilson Exhibit, Pa-	
cific Iron Works Letter of January 28	
1911	
Defendants' Exhibit—Wilson Exhibit, Put-	
nam & Valentine Paid Photograph Ac-	
count Defendants' Exhibit—Wilson Exhibit "B'	
—Specimens of Grigsby's Handwriting	
or Shipping Receipt of May 25, 1911	
Defendants' Exhibit — Wilson Exhibit.	
Chas. E. Wilcox, Key Reproduction	
Sketch	
Defendants' Exhibit — Wilson Exhibit	
Knapp Single-piece Key Reproduction	
Sketch	
Defendants' Exhibit — Wilson Exhibit	
Photo "A," of Wilson Reamer 2-piece	,
Key Device	760
Defendants' Exhibit — Wilson Exhibit	,
Photo "B" of Wilson Reamer 2-piece	
Key Device	
Defendants' Exhibit—Wilson Exhibit, Re-	

Index.	Page
EXHIBITS—Continued:	
production Sketch of Sketches of Late	3
January and Early February, 1911	. 818
Defendants' Exhibit—Wilson Exhibit, Wil	-
son Reamer Booklet of 1911 Delivery	7
Slip	771
Defendants' Exhibit—Wilson Exhibit, Wil	-
son Reamer Key and Tee Sketch of	f
1911	. 814
Defendants' Exhibit—Wilson Exhibit, W	•
W. Wilson Key Reproduction Sketch.	. 817
Defendants' Exhibit 2—Two Shop Orders	,
Wilson & Willard Manufacturing Com	L -
pany to Pacific Iron Works, 1–26-	-
1911	. 765
Defendants' Exhibit 3—Certified Copy of	
Records of Patent Office of Declaration	1
of Interference	
Defendants' Exhibit 4—Tracing Wilson	
Under-reamer T-bar Details	
Defendants' Exhibit 5, Tracing Wilson	
Under-reamer Body	
Defendants' Exhibit 6—Bundle of Shop	
Record Slips	
Defendants' Exhibit 7—Bundle of Shop	
Record Slips	
Defendants' Exhibit 8—Bundle of Shop	•
Record Slips	
Defendants' Exhibit 10, Sketch of Key	
Made by Houriet	
Defendants' Exhibit 13—Houriet Sketch.	. 820

Index.	Page
EXHIBITS—Continued:	
Defendants' Exhibit 14—Bundle of Shop	o o
Record Slips—Bole's Exhibit Wilson	1
· Cross-examination 6	. 821
Defendants' Exhibit 15—Bole's Exhibi	t
Adams Sketch	. 824
Defendants' Exhibit 16—Certified Copy	У
File-Wrapper Contents and Drawings	,
Application of E. C. Wilson, Seria	1
No. 755,170	. 825
Defendants' Exhibit 17—Certified Copy	y
File-Wrapper and Contents, Decision	1
in Interference Proceeding No. 37,126	. 861
Interlocutory Decree	
Motion for Leave to Amend Answer, etc	. 28
Motion to Strike Alleged Counterclaim	. 23
Motion to Strike Out Alleged Counterclaim of	r
Setoff	. 24
Names and Addresses of Attorneys	
Notice of Motion	
Opinion	
Order Allowing Appeal	. 892
Order Extending Time to August 1, 1915, to	
File Record	
Order Extending Time to September 1, 1915, to	
File Record	
Order for Transmission of Certain Origina	
Physical Exhibits to United States Circuit	
Court of Appeals for the Ninth Circuit.	
Order Granting Motion to Amend, etc	. 39

Index.	Page
Order Granting Motion to Strike Alleged Coun-	
terclaim	26
Petition for Order Allowing Appeal	889
Praecipe for Transcript on Appeal	898
Reply	40
Reporter's Transcript	
Reporter's Transcript	
Stipulation and Order of April 23, 1915, in re-	
Withdrawal of Exhibits and Transmission	L
to U. S. Patent Office	
Stipulation and Order of April 26, 1915, in re-	9
Transcript of Testimony and Portions to be	
Stricken, in Preparation of Transcript of	
Record on Appeal	
Subpoena ad Respondendum	10
TESTIMONY ON BEHALF OF PLAIN	-
TIFF:	
ADAMS, AUGUST F. (in Rebuttal)	
Cross-examination	
BOLE, ROBERT E	
Recalled	
Cross-examination	
Recalled by the Court	
NAPHAS, HARRY (in Rebuttal)	
Cross-examination	
Redirect Examination	
Recross-examination	. 623
TESTIMONY ON BEHALF OF DEFEND	-
ANTS:	
FAHNESTOCK, WILLIAM H	
Recalled	
Cross-examination	. 673

Index.	Page
TESTIMONY ON BEHALF OF DEFEND	-
ANTS—Continued:	
Redirect Examination	675
Recross-examination	677
GRIGSBY, E. F. (in Rebuttal)	. 660
Cross-examination	
HOURIET, ALBERT W	. 473
Cross-examination	
Recalled	
Recross-examination	. 506
Recalled in Rebuttal	
Recalled by the Court	
KNAPP, WILLIAM G	
Cross-examination	
Redirect Examination	
Recross-examination	
RYDGREN, FRITZ R	
Cross-examination	
WILLARD, A. G	
Cross-examination	
Redirect Examination	
Recross-examination	
Redirect Examination	
In Rebuttal	
Cross-examination	
Redirect Examination	
Recross-examination	
Redirect Examination	
Cross-examination	
Redirect Examination	
Recross-examination	. 465

Index.	Page
TESTIMONY ON BEHALF OF DEFEND-	
ANTS—Continued:	
Recalled	650
Cross-examination	656
Recalled	684
WILCOX, CHARLES E	236
Cross-examination	
Redirect Examination	263
WILSON, E. C	78
Cross-examination	158
Redirect Examination	192
Recross-examination	196
Redirect Examination	197
Recross-examination	197
Redirect Examination	198
Recalled	640
Cross-examination	648
Recalled in Rebuttal	698
WILSON, W. W	267
Cross-examination	291
Redirect Examination	. 296
Recalled	679
Cross avamination	600

Names and Addresses of Attorneys.

For Appellants:

RAYMOND IVES BLAKESLEE, Esq., California Building, Los Angeles, California; FREDERICK A. STEPHENSON, Esq., Douglas Building, Los Angeles, California.

For Appellees:

FREDERICK S. LYON, Esq., Merchants Trust Building, Los Angeles, California. [7*]

[Citation.]

UNITED STATES OF AMERICA,—ss.

To Edward Double and Robert E. Bole, Greeting:

You are hereby cited and admonished to be and appear at a United States Circuit Court of Appeals for the Ninth Circuit, to be held at the City of San Francisco, in the State of California, on the 17th day of May, A. D. 1915, pursuant to an order allowing an appeal, entered in the clerk's office of the District Court of the United States, of the Ninth Judicial Circuit, in and for the Southern District of California, Southern Division, in that certain suit in equity, No. B-19-Equity, wherein you are complainants and appellees, and Wilson and Willard Manufacturing Company and Elihu C. Wilson are the defendants and appellants, to show cause, if any there be, why the order or decree of said Court made and entered April 16th, 1915, against said appellants, in the said order allowing appeal mentioned, should not be corrected and speedy justice should not be

^{*}Page-number appearing at foot of page of original certified Record.

done to the parties in that behalf.

WITNESS, the Hon. OSCAR A. TRIPPET, United States District Judge for the Southern District of California, of the Ninth Judicial Circuit, this 23d day of April, 1915.

OSCAR A. TRIPPET,

United States District Judge for the Southern District of California.

Due service and receipt of a copy of the within citation is hereby admitted this 23d day of April, 1915.

FREDERICK S. LYON.

Solicitor and of Counsel for Complainants. [8]

[Endorsed]: No. B-19—In Equity. United States District Court, Southern District of California, Southern Division. Robert E. Bole and Edward Double, Complainants, vs. Wilson and Willard Manufacturing Company, and Elihu C. Wilson, Defendants. Citation. Filed Apr. 26, 1915. Wm. M. Van Dyke, Clerk. By R. S. Zimmerman, Deputy Clerk. [9]

In the District Court of the United States, in and for the Southern District of California, Southern Division.

No. B-19—EQ.

ROBERT E. BOLE and EDWARD DOUBLE, Complainants,

VS.

WILSON & WILLARD MANUFACTURING COMPANY and ELIHU C. WILSON,

Defendants. [10]

United States District Court, Southern District of California, Southern Division.

IN EQUITY.

ROBERT E. BOLE and EDWARD DOUBLE,
Complainants,

vs.

WILSON & WILLARD MANUFACTURING COMPANY and ELIHU C. WILSON,

Defendants.

Bill of Complaint.

To the Honorable, the Judges of the District Court of the United States, in and for the Southern District of California, Southern Division:

Robert E. Bole and Edward Double, citizens and residents of the City of Los Angeles, County of Los Angeles, State of California, bring this their Bill of Complaint against Wilson & Willard Manufacturing Company, a corporation organized and existing under and by virtue of the laws of the State of California, and having its principal place of business in the City of Los Angeles, California, and Elihu C. Wilson, a citizen and resident of the City of Los Angeles, County of Los Angeles, State of California, Defendants, and complaining of said Defendants, show unto your Honors: [11]

I.

That heretofore, to wit, prior to February 19th, 1913, your orator Robert E. Bole was the original, first, and sole inventor of a certain new and useful under-reamer, not known or used by others before

his invention or discovery thereof or patented or described in any printed publication in the United States of America or any foreign country before his invention or discovery thereof, or more than two years prior to his application for letters patent in the United States of America as hereinafter set forth, or in public use or on sale in the United States of America for more than two years prior to his said application for letters patent of the United States therefor and not abandoned, and for which your orator, Robert E. Bole, or his legal representatives or assigns, had not, prior to the filing of his said application for letters patent of the United States, filed or made any application for letters patent thereon in any country foreign to the United States.

II.

That your orator, Robert E. Bole, on February 19th, 1913, made application in writing in due form of law to the Commissioner of Patents of the United States of America in accordance with the then existing laws in such case made and provided and complied in all respects with the conditions and requirements of said law, and on February 12th, 1913, by an instrument in writing in due form of law duly signed by your orator, Robert E. Bole, and by him delivered to your orator, Edward Double, did sell, assign, transfer, and set over unto your orator, Edward Double, an undivided one-half (1/2) part [12] of the full and exclusive right, title, and interest in and to the said invention and the letters patent to be granted and issued therefor, and did authorize and request the Commissioner of Patents of the United

States of America to issue said letters patent jointly to your said orators, their heirs, legal representatives, and assigns; that said instrument in writing was on February 19th, 1913, duly recorded in Liber Q-91, Page 379 of Transfers of Patents in the United States Patent Office; that thereafter such proceedings were duly and regularly had and taken in the matter of such application that to wit, on December 2d, 1913, letters patent of the United States of America, Number 1,080,135 were duly and regularly granted, issued, and delivered by the Government of the United States of America to your orators, whereby there was granted and secured to your orators, their heirs, legal representatives, and assigns for the full term of Seventeen (17) years from and after December 2d, 1913, the sole and exclusive right, liberty, and privilege of making, using, and vending to others to be used the said invention throughout the United States of America and the Territories thereof; that said letters patent were duly issued in due form of law, under the seal of the United States Patent Office, and duly signed by the Acting Commissioner of Patents, all as will more fully and at large appear from said letters patent or a duly certified copy thereof which are ready in court to be produced as may be required, and that prior to the grant, issuance, and delivery of said letters patent all proceedings were had and taken which were required by law to be had and taken prior to the issuance of letters patent for new and useful inventions. [13]

III.

Your orators further show unto your Honors that the invention so set forth, described, and claimed in and by said letters patent is of great value, and that since the invention thereof by your orator, Robert E. Bole, under-reamers containing the said invention have gone into great and extensive use, and that the defendants and each of them have at all times had full knowledge and notice of the invention thereof by your orator, Robert E. Bole, and of the grant, issuance, and delivery of said letters patent therefor to your orators, and but for the wrongful and infringing acts of the defendants as hereinafter set forth, your orators would now continue to enjoy the said exclusive rights, and the same would be of great and incalculable benefit and advantage to your orators, and that the said defendants have been long prior to the commencement of this suit notified in writing of the grant, issuance, and delivery of said letters patent, and of the rights of your orators thereunder, and demand has been made upon defendants and each of them to respect the said letters patent and not to infringe thereon.

IV.

Your orators further show unto your Honors that notwithstanding the premises, but well knowing the same, and without the license or consent of your orators or of either of your orators, and in violation of said letters patent and of your orators' rights thereunder, the said defendants herein have, on December 2d, 1913, and on divers days and dates thereafter, and prior to the filing of this Bill of Complaint,

and within the Southern District of California, to wit, in the County of Los [14] Angeles, State of California, and elsewhere, made and sold to others to be used, and are now making and selling to others to be used, under-reamers embodying, containing, and embracing the invention described, claimed, and patented in and by said Letters Patent Number 1,080,135, and have infringed upon the exclusive rights secured to your orators by virtue of said letters patent, and that the under-reamers so made and sold by defendants were and are infringements upon said letters patent and each of said under-reamers contains in it the said patented invention, and that although requested so to do, defendants refuse to cease and desist from the infringement aforesaid, and are now making and selling under-reamers containing and embracing the said patented invention, and threaten and intend to continue so to do, and will continue so to do unless restrained by this Court, and are realizing as your orators are informed and verily believe large gains, profits, and advantages, the exact amount of which is unknown to your orators; that by reason of the premises and the unlawful acts of the defendants aforesaid, your orators have suffered damages in the full sum of Fifty Thousand Dollars (\$50,000.00), and are now suffering great and irreparable damage and injury; that for the wrongs and injuries herein complained of your orators have no plain, speedy, or adequate remedy at law and are without remedy save in a court of equity where matters of this kind are properly cognizable and relievable.

To the end, therefore, that the said defendants, Wilson & Willard Manufacturing Company and Elihu C. Wilson may if they can, show why your orators should not have the relief [15] herein prayed, and may according to the best and utmost of their knowledge, recollection, information, and belief, but not under oath, an answer under oath being hereby expressly waived, full, true, direct and perfect answer make to all and singular the matters and things hereinbefore charged; your orators further pray that the defendants may be enjoined and restrained, both provisionally and perpetually from the further infringement upon the said letters patent, and be decreed to account for and pay over unto your orators the gains and profits realized by the defendants and each of them, from and by reason of the infringement aforesaid and may be decreed to account for and pay over unto your orators the damages suffered by your orators by reason of the said infringement, together with the costs of this suit, and for such other and further or different relief as equity and good conscience shall require.

May it please your Honors to grant unto your orators a Writ of Injunction issued out of and under the seal of this Court, provisionally, and until the final hearing, enjoining and restraining said defendants, the Wilson & Willard Manufacturing Company and Elihu C. Wilson, their officers, agents, attorneys, employees, associates, servants, and confederates, and each and every thereof, from making, or using, or selling any under-reamer containing or embracing the invention patented in and by said letters

patent, and that upon the final hearing of this case said provisional injunction may be made final and perpetual.

And your orators will ever pray.

ROBERT E. BOLE, EDWARD DOUBLE.

By his Counsel, FREDERICK S. LYON,

FREDERICK S. LYON,

Solicitor and of Counsel for Complainants.

[16]

United States of America, State of California, County of Los Angeles,—ss.

Robert E. Bole, being duly sworn on oath says:

That he is one of the complainants named in the foregoing Bill of Complaint, that he has read said Bill of Complaint and knows the contents thereof, and that the same is true of his own knowledge.

ROBERT E. BOLE.

Subscribed and sworn to before me, this 28th day of July, 1914.

LORRAINE E. DURROW,

Notary Public in and for the County of Los Angeles, State of California.

[Endorsed]: No. B-19—Eq. United States District Court, Southern District of California, Southern Division. Robert E. Bole and Edward Double, Complainants, vs. Wilson & Willard Manufacturing Company and Elihu C. Wilson, Defendants. In Epuity. Bill of Complaint. Filed Jul. 28, 1914.

Wm. M. Van Dyke, Clerk. By R. S. Zimmerman, Deputy Clerk. Frederick S. Lyon, 504–7 Merchants Trust Building, Los Angeles, Cal., Solicitor for Complainants. [17]

[Subpoena ad Respondendum.] UNITED STATES OF AMERICA.

District Court of the United States, Southern District of California, Southern Division.

IN EQUITY.

The President of the United States of America, Greeting:

To Wilson & Willard Manufacturing Company and Elihu C. Wilson.

You are hereby commanded, that you be and appear in said District Court of the United States aforesaid, at the courtroom in Los Angeles, Cal., on or before the twentieth day, excluding the day of service, after service of this subpoena upon you, to answer a Bill of Complaint exhibited against you in said court by Robert E. Bole and Edward Double, who are citizens of the State of California, and to do and receive what the said Court shall have considered in that behalf. And this you are not to omit, under the penalty of FIVE THOUSAND DOLLARS.

WITNESS, The Honorable OLIN WELLBORN, Judge of the District Court of the United States, this 28th day of July, in the year of our Lord one thousand nine hundred and fourteen and of our In-

dependence the one hundred and thirty-ninth.

WM. M. VAN DYKE,

Clerk.

By R. S. Zimmerman, Deputy Clerk.

MEMORANDUM PURSUANT TO RULE 12, OF RULES OF PRACTICE FOR THE COURTS OF EQUITY OF THE UNITED STATES, PROMULGATED BY THE SUPREME COURT, NOVEMBER 4, 1912.

On or before the twentieth day after service of the subpoena, excluding the day thereof, the defendant is required to file his answer or other defense in the clerk's office; otherwise the Bill may be taken pro confesso.

WM. M. VAN DYKE,

Clerk.

By R. S. Zimmerman,

Deputy Clerk. [18]

To the Marshal of the United States for the Southern District of California:

Pursuant to Rule 12, the within subpoena is returnable into the clerk's office twenty days from the issuing thereof.

Subpoena issued July 28th, 1914.

WM. M. VAN DYKE,

Clerk.

By R. S. Zimmerman, Deputy Clerk. United States Marshal's Office, Southern District of California.

I HEREBY CERTIFY, that I received the within writ on the 30th day of July, 1914, and personally served the same on the 1st day of August, 1914, on Wilson & Willard Mfg. Co. by delivering to and leaving with E. C. Wilson personally and E. C. Wilson for the Willard & Wilson Mfg. Co., said defendants named therein, personally, at the County of L. A., in said District, a copy thereof.

Los Angeles, August 1st, 1914.

W. T. WALTON, U. S. Marshal, By D. S. Bassett, Deputy.

[Endorsed]: Marshal's Civil Docket No. 2479. No. B-19—Equity. U. S. District Court, Southern District of California, Southern Division. In Equity. Robert E. Bole et als. vs. Wilson & Willard Mfg. Co. et als. Subpoena. Filed Aug. 1, 1914, Wm. M. Van Dyke, Clerk. By R. S. Zimmerman, Deputy Clerk. Eq. R. B. 430. [19]

In the United States District Court, Southern District of California, Southern Division.

IN EQUITY—No. B-19.

ROBERT E. BOLE and EDWARD DOUBLE, Complainants,

vs.

WILSON & WILLARD MANUFACTURING
COMPANY and ELIHU C. WILSON,
Defendants.

Amended and Substituted Answer.

Come now Wilson and Willard Manufacturing Company and Elihu C. Wilson, defendants in the above-entitled suit, and each and both, for Answer to the Bill of Complaint of said complainants:

I.

Deny that prior to February 19, 1913, or at any time, complainant Robert E. Bole was the original, first and sole inventor of any new and useful underreamer or any under-reamer; deny that the same was not know nor used by others before his purported invention or discovery thereof, or patented, or described in any printed publication in the United States of America or any foreign country before his purported invention or discovery thereof.

II.

Admit that the complainant Robert E. Bole, on February 19, 1913, made application in writing in some form or other to the Commissioner of Patents of the United States of America, but deny that on February 12, 1913, complainant Robert E. Bole by

an instrument in writing or in any manner whatsoever by complainant Robert E. Bole delivered [20] to complainant Edward Double, did sell, assign, transfer and set over unto said complainant Edward Double an undivided one-half (1/2) part or any part of the full and exclusive, or any right, title and interest in and to any invention and any letters patent, or did authorize and request the Commissioner of Patents of the United States of America or any other person or official to issue any letters patent jointly to said complainants, their heirs, legal representatives, or assigns; deny that said instrument in writing was on February 19, 1913, duly recorded in Liber Q-91, page 379, of Transfers of Patents in the United States Patent Office, or in any other place of purported recordation; admit that after erroneous, careless or inadvertent action and procedure on the part of the United States Patent Office in the matter of such application, pretended letters patent No. 1,080,135 of the United States of America, were, December 2, 1913, granted, issued and delivered, but not duly or regularly, by the Government of the United States of America, to complainants, whereby there was purported to be granted and secured, though improperly, as hereinafter set forth, to said complainants, their heirs, legal representatives and assigns, for the full term of seventeen (17) years from and after December 2, 1913, the sole and exclusive right, liberty and privilege of making, using and vending to others to be used the said invention throughout the United States of America and the territories thereof, which invention, as a matter of

fact, was the property of and was produced by the defendant Elihu C. Wilson herein, all as will more fully hereinafter be set forth, and whose claim of such invention was for many months known in and by the Patent Office of the United States of America prior to the date of improper or inadvertent issuance of said pretended letters patent to said Robert E. Bole and his purported assignee, said Edward Double; deny, being only so informed by the Bill of Complaint [21] herein, that said pretended letters patent were duly issued in due form of law under the seal of the United States Patent Office, or duly signed by the Acting Commissioner of Patents or by any official thereunto empowered whatsoever, or that prior to the grant, issuance and delivery of said letters patent all proceedings were had and taken which were required by law to be had and taken prior to the issuance of letters patent for new and useful inventions, and on the contrary aver and contend that the proceedings taken prior to the grant, issuance and delivery of said letters patent were incomplete or inadvertent and not in accordance with the law and proper practice binding upon, and in force within the portals of, the United States Patent Office and the Commissioner of Patents of the United States of America.

TIT.

Admit that the invention set forth, described and claimed in and by said purported letters patent No. 1,080,135 is of great value, and that since the invention or production thereof by the defendant Elihu C. Wilson, and not by the complainant Robert E. Bole,

under-reamers containing the said invention have gone into great and extensive use; deny that the defendants and each of them had at all or any times any knowledge and notice of the invention thereof by the complainant Robert E. Bole, and of the grant, issuance and delivery of said pretended letters patent therefor to the complainants, but on the contrary aver that said complainants have had at all times full knowledge and notice of the invention or production thereof by the defendant Elihu C. Wilson; deny that but for the alleged wrongful and infringing acts of the defendants the complainants would now continue to enjoy the said exclusive rights or any exclusive rights, and aver that said pretended letters patent were wrongfully and fraudulently obtained and secured in and to said complainants no true and substantial rights, cognizable by law or equity; [22] deny that the same could or would be of any or great and incalculable benefit or advantage to complainants because unlawfully, wrongfully, and fraudulently claimed and asserted; admit that the complainants or the complainant Robert E. Bole, had the temerity prior to the commencement of this suit to notify the defendants in writing of the grant, issuance and delivery of said purported and fraudulently obtained letters patent, and of the alleged rights of the complainants thereunder, and that impertinent demand has been made upon defendants and each of them to respect the said purported and wrongfully obtained and issued letters patent and not to infringe thereon.

IV.

Admit that without the license or consent of complainants or either of them, such license or consent being in law and equity useless and valueless because of the fraudulent application for said pretended letters patent by said complainant Robert E. Bole, and therefore in violation of no valid letters patent and no pretended rights of the complainants thereunder, the defendants herein have both before and subsequent to the application for the issuance of said pretended letters patent, and prior to the filing of this Bill of Complaint, and with the Southern District of California, to wit, in the County of Los Angeles, State of California, made and sold to others to be used, and are now making and selling to others to be used, under-reamers embodying, containing and embracing the invention described, claimed and wrongfully patented in and by pretended letters patent Number 1,080,135, but deny that they can have infringed upon the alleged exclusive or any rights purported to be secured to the complainants by virtue of said purported letters patent, because of the invalidity of said letters patent as hereinabove and hereinafter set forth; deny that the under-reamers so made and sold by defendants were and are or could be infringements upon any valid [23] letters patent of said complainants, but admit that each of said under-reamers contains in it the invention or substantially the invention described, claimed and patented in and by said wrongfully obtained letters patent Number 1,080,135; admit that defendants refused to cease and desist from the alleged infringing acts aforesaid, and are now making and selling under-reamers containing and embracing the said invention, and threaten and intend to continue so to do, and will be able to show unto this Court that they are entitled so to do and may properly so do; admit that they are realizing certain gains, profits and advantages; deny that by reason of the premises or any purported unlawful acts the complainants have suffered damages in the full sum of Fifty Thousand dollars (\$50,000) or any damages whatsoever, or are now suffering great or irreparable or any damage or injury, avering that the complainants have no rights or privileges to be traversed or encroached upon in the premises; admit that for the alleged but nonexistent wrongs and injuries complained of complainants have no plain, speedy or adequate or any remedy at law and contend that complainants are without remedy even in this court of Equity, not coming herein with clean hands but rather upon the insupportable and fraudulent contentions and wrongfully asserted rights and improperly or inadvertently issued pretended letters patent of said complainants.

V.

Defendants allege that the said pretended letters patent are wholly void and of no effect and did not secure and do not secure to the alleged grantees thereof at any time the alleged or any exclusive rights whatsoever; that on the contrary, the pretended inventor, Robert E. Bole, was not the original, first or sole inventor of any material or any part of the subject matter of said pretended and wrong-

fully obtained letters patent, but obtained all his knowledge and information with respect [24] to such subject matter from the defendant herein, Elihu C. Wilson, who filed an application for letters patent of the United States therefor March 18, 1913, such Elihu C. Wilson, the defendant, being the true, original, first and sole inventor of the subject matter of said pretended letters patent, and who was using reasonable diligence in adapting and perfecting said invention, and who was, with said defendant Wilson & Willard Manufacturing Company, on his own behalf, manufacturing and selling underreamers embodying said invention at Los Angeles, County of Los Angeles, State of California, in said Southern Division of said Southern District of California, all with the knowledge of and without protest of said complainant Robert E. Bole, for a period of over one year prior to said pretended invention by said Robert E. Bole and to the filing of said application for said pretended letters patent by said Robert E. Bole; and that said Robert E. Bole thus unjustly and fraudulently applied for and obtained said pretended letters patent for what was in fact the invention and production, and generally recognized and admitted invention and production, of said defendant Elihu C. Wilson; and further aver that on February 3, 1914, the Commissioner of Patents, of the United States Patent Office, did declare an interference or contest of priority of invention to exist between said application for letters patent for said invention filed by said defendant Elihu C. Wilson and said pretended letters patent Number 1,080,135,

and that proceedings have been had and taken therein on behalf of defendant Elihu C. Wilson conclusively tending to prove said Elihu C. Wilson to be the original, first and sole and true inventor of the invention of said pretended letters patent issued to said complainant Robert E. Bole.

VI.

As a counterclaim or set-off to the alleged and pretended [25] cause of action of the complainants herein against the defendants. Defendants show this Court that in and as part of a settlement of account between said complainant Robert E. Bole and said defendants, of which said Wilson is the president of said company, enforced by the defendants because of the excessive and long increasing indebtedness of said Robert E. Bole to said defendant Wilson & Willard Manufacturing Company, and effected within twenty days prior to the filing by said Robert E. Bole of the application for said pretended letters patent Number 1,080,135, said Robert E. Bole, having during altercations about said account unjustly and maliciously asserted a right and interest in and concerning said invention the subject matter of said pretended letters patent, did not the time of said settlement of account, withdraw and waive any claim of right of invention or interest whatsoever pertaining to the invention being said subject matter of said pretended letters patent; that in violation of said covenant said Bole did, if the allegations thereunto in the Bill of Complaint be true, immediately assign an undivided one-half (1/2) interest in and to said invention, known by said

Robert E. Bole to be the production and property of said Defendant Elihu C. Wilson, to said complainant Edward Double, a sharp business competitor of said defendants, and did thereupon prepare and file in the United States Patent Office, with fraudulent intent, an application for said subsequently issued pretended letters patent; that by reason of the premises and the unlawful and improper acts of the complainants aforesaid, and by the improper and damaging assertions by complainants in the trade and elsewhere that said Robert E. Bole and not said Elihu C. Wilson is the true, lawful, original, first and sole inventor of the said invention, and by reason of the large and burdensome expense to which the defendant Elihu C. Wilson has been subjected by reason of said priority contest tardily instituted by the [26] Commissioner of Patents to determine to which application of the said copending applications for letters patent of the United States for said invention, said improper patentee-complainant Robert E. Bole, or said defendant Elihu C. Wilson, is the true, original, first and sole inventor of the subject matter of said pretended letters patent Number 1,080,135; and by reason of the expense, annovance and labor to which the defendants are thus wrongfully put as concerns the defense of this present action, the defendants, and particularly the defendant Elihu C. Wilson, have suffered damages in the full sum of Seventy-five Thousand Dollars (\$75,000) and are now suffering great and irreparable damage and injury.

WHEREFORE, Defendants pray to be hence dis-

missed with their reasonable costs and disbursements in this behalf sustained, together with judgment against said complainants in the said sum of Seventy-five Thousand Dollars (\$75,000) with interest.

WILSON AND WILLARD MANUFAC-TURING COMPANY and ELIHU C. WILSON, By RAYMOND IVES BLAKESLEE,

Their Solicitor.

RAYMOND IVES BLAKESLEE,
Solicitor and Counsel for Defendants.

[Endorsed]: No. B-19—Equity. United States District Court, Southern District of California, Southern Division. Robert E. Bole and Edward Double, Complainants, vs. Wilson & Willard Mfg. Co., and Elihu C. Wilson, Defendants. Amended and Substituted Answer. Received a Copy of the Within Amended and Substituted Answer this 20th day of August, 1914. Frederick S. Lyon, Solicitor for Complainants. Filed Aug. 20, 1914. Wm. M. Van Dyke, Clerk. By Leslie S. Colyer, Deputy Clerk. Raymond Ives Blakeslee, 728–30 California Building, Los Angeles, Cal., Solicitor for Defendants. [27]

[Motion to Strike Alleged Counterclaim.]

United States District Court, Southern District of California, Southern Division.

IN EQUITY—No. B–19.

ROBERT E. BOLE and EDWARD DOUBLE, Complainants,

VS.

WILSON & WILLARD MANUFACTURING
COMPANY and ELIHU C. WILSON,
Defendants

To Wilson & Willard Manufacturing Company and

Elihu C. Wilson, Defendants Above Named, and Raymond Ives Blakeslee, Their Solicitor:

Please take notice that complainants will bring on for hearing before the Court, at the courtrooms thereof, on Monday, August 31st, 1914, at the opening of court on said day or as soon thereafter as counsel can be heard, the attached Motion to Strike Out the Alleged Counterclaim or Setoff, attempted or pretended to be set up in the amended and substituted answer of the defendants in the above-entitled suit.

FREDERICK S. LYON, Solicitor for Complainants. [28]

United States District Court, Southern District of California, Southern Division.

IN EQUITY—No. B-19.

ROBERT E. BOLE and EDWARD DOUBLE,

Complainants,

VS.

WILSON & WILLARD MANUFACTURING COMPANY and ELIHU C. WILSON,

Defendants.

Motion to Strike Out Alleged Counterclaim or Setoff.

Come now complainants above named, by Frederick S. Lyon, their solicitor, and move to strike out the alleged counterclaim or setoff attempted to be set up in Paragraph VI of defendants' amended and substituted answer, upon the following grounds:

First. That the same is insufficient in law to be answered unto by these complainants or either of them.

Second. That the same is not a counterclaim or setoff within Equity Rule 30.

Third. That from the allegations and recitals of said Paragraph VI of said amended and substituted answer it appears [29] that in law and in equity the said defendants or either of them have no counterclaim or setoff either in law or in equity against these complainants or either of them.

Fourth. That the following recital or allegation of said Paragraph VI is impertinent to, irrelevant to, and immaterial to any such pretended counter-

claim or setoff on behalf of either of said defendants, to wit:

"And by reason of the large and burdensome expense to which the defendant Elihu C. Wilson has been subjected by reason of said priority contest tardily instituted by the Commissioner of Patents to determine to which applicant of the said copending applications for letters patent of the United States for said invention, said improper patentee—complainant Robert E. Bole, or said defendant Elihu C. Wilson, is the true, original, first and sole inventor of the subject matter of said pretended Letters Patent Number 1,080,135."

FREDERICK S. LYON, Solicitor for Complainants.

[Endorsed]: No. B-19. United States District Court, Southern District of California, Southern Division. Robert E. Bole and Edward Double, Complainants, vs. Wilson & Willard Mfg. Company and Elihu C. Wilson, Defendants. In Equity. Notice, and Motion to Strike Out Alleged Counterclaim or Setoff. Received a Copy of the Within Motion this August 21, 1914, Raymond Ives Blakeslee, Solicitor for Defendants. Filed Aug. 21, 1914, Wm. M. Van Dyke, Clerk. By Chas. N. Williams, Deputy Clerk. Frederick S. Lyon, 504-7 Merchants Trust Building, Los Angeles, Cal., Solicitor for Complainants. [30]

At a stated term, to wit, the July Term, A. D. 1914. of the District Court of the United States of America, in and for the Southern District of California, Southern Division, held at the Courtroom thereof in the City of Los Angeles, on Wednesday, the twenty-eighth day of October, in the year of our Lord one thousand nine hundred and fourteen. Present: The Honorable BENJAMIN F. BLEDSOE, District Judge.

[Order Granting Motion to Strike Alleged Counterclaim.]

No. B-19—EQUITY.

ROBERT E. BOLE et al.,

Complainants,

VS.

WILSON & WILLARD MANUFACTURING COMPANY et al.,

Defendants.

This cause coming on at this time to be heard on the motion to strike out the alleged counterclaim or setoff herein; Frederick S. Lyon, Esq., appearing as counsel for complainants; Raymond Ives Blakeslee, Esq., appearing as counsel for defendants; and said motion having been argued, in support thereof, by Frederick S. Lyon, Esq., of counsel for complainants, and in opposition thereto by Raymond Ives Blakeslee, Esq., of counsel for defendants; and this cause having been submitted to the Court for its consideration and decision on said motion and the

Defendants further aver that proceedings have been further had and taken on behalf of complainant herein, Robert E. Bole, in which proceedings said complainant has failed to establish his right to said pretended letters patent No. 1.080,135, or to the invention set forth and claimed therein, and has likewise failed to controvert the proofs that said Elihu C. Wilson, of defendants, is the original, first and sole and true inventor of the invention of said pretended letters patent issued to said complainant Robert E. Bole: that a considerable period of time will necessarily elapse before the United States Patent Office [33] can hear and determine this said cause in interference or contest of priority; and that if judgment of priority in said interference cause is awarded to the defendant Elihu C. Wilson herein, letters patent of the United States will in due course issue to said Elihu C. Wilson for the subject matter of said pretended letters patent No. 1,080,135, including all of the claims thereof, whereupon it will be necessary to invoke the powers of this Court, under the statutes, to cancel one or the other of such letters patent, namely, the letters patent, if granted to said defendant Elihu C. Wilson, or such pretended letters patent No. 1,080,135; and that until such contest of priority has been determined by the United States Patent Office and such further contest as may be necessary with respect to originality and priority of invention pertinent to the subject matter of said pretended letters patent has been decided, it will be impossible for this Court in the usual and approved and proper and complete Angeles, California, I shall present for the consideration of the Court the annexed motion for leave to amend, etc., the answer herein.

Dated at Los Angeles, California, October 31, 1914.
RAYMOND IVES BLAKESLEE,

Solicitor and of Counsel for Defendants. [32]

In the United States District Court, Southern District of California, Southern Division.

IN EQUITY—No. B–19.

ROBERT E. BOLE and EDWARD DOUBLE, Complainants,

VS.

WILSON and WILLARD MANUFACTURING
COMPANY and ELIHU C. WILSON,
Defendants.

Motion for Leave to Amend Answer, etc.

Now come the defendants herein, Wilson and Willard Manufacturing Company and Elihu C. Wilson, by their solicitor and counsel Raymond Ives Blakeslee, and move this Honorable Court for leave to amend and amplify and restore to the amended and substituted answer herein in the respects and particulars hereinafter noted. At the hearing of this Motion the defendants will rely upon the record in this case and upon the affidavit of Raymond Ives Blakeslee, solicitor and counsel for defendants, hereunto annexed.

Petition is made for leave to amend as follows: By inserting at the end of paragraph V:

oral argument thereof, it is now by the Court ordered that said motion to strike out herein the alleged counterclaim or setoff be, and the same hereby is granted.

[Endorsed]: No. B-19—Eq. United States District Court, Southern District of California, Southern Division. Robert E. Bole et al. vs. Wilson & Willard Manufacturing Company et al. Copy Minute Order Granting Motion to Strike out Alleged Counterclaim or Setoff. Filed Apr. 17, 1915. Wm. M. Van Dyke, Clerk. By Leslie S. Colyer, Deputy. [31]

In the United States District Court, Southern District of California, Southern Division.

IN EQUITY—No. B-19.

ROBERT E. BOLE and EDWARD DOUBLE, Complainants,

VS.

WILSON & WILLARD MANUFACTURING COMPANY and ELIHU C. WILSON, Defendants.

Notice of Motion.

To Robert E. Bole and Edward Double, Complainants Herein, and Frederick S. Lyon, Their Solicitor:

Please take notice that on Monday, November 16th, 1914, at the hour of 10:30 o'clock A. M., or as soon thereafter as counsel can be heard, at the courtroom of this court, in the Federal Building, Los

manner to pass upon and determine the validity or invalidity of said pretended letters patent No. 1,080,-135, and to determine who, whether said complainant Robert E. Bole or said defendant Elihu C. Wilson, is the original, first and sole and true inventor of the invention, the subject of said pretended letters patent sued under herein.

VI.

Defendants further allege and show this Court that in and as part of a settlement of account, at one time existing between said complainant Robert E. Bole and said defendants, of which defendants said Wilson is and was the president of said defendant company, enforced by the defendants because of the excessive and long increasing indebtedness of said Robert E. Bole to said defendant Wilson & Willard Manufacturing Company, and the increasingly unsatisfactory business relations between said Robert E. Bole and said defendants, and effected within substantially twenty [34] days prior to the filing by said Robert E. Bole of the application for said pretended letters patent No. 1,080,135, said Robert E. Bole having during altercations concerning said account and said business relations unjustly and maliciously asserted a right and interest in and concerning said invention, the subject matter of said pretended letters patent, did, at the time of said settlement of account and business relations, withdraw and waive any claim or right of invention or interest whatsoever pertaining to the invention being said subject matter of said pretended letters patent, and did covenant that in no way would said Robert E. Bole injure or cause injury to or damage or cause damage to said defendants in any manner whatsoever with relation to said invention the subject matter of said pretended letters patent; whereby said complainant Robert E. Bole and said complainant Edward Double, assignee of one-half interest in and to said invention, if the allegations thereunto in the Bill of Complaint herein be true, is and are estopped from asserting any pretended right or claim, as in the Bill of Complaint herein may be set forth, against said defendants herein or either of them.

VII.

As a counterclaim or set-off to the alleged or pretended cause of action of the complainants herein against the defendants, the defendants allege: That heretofore, to wit, prior to the 19th day of February, 1913, complainant Robert E. Bole entered into certain business transactions and relations with the defendants herein, of which defendant corporation the defendant Elihu C. Wilson was at all times the president; that among such business relations was that concerning the business of complainant Robert E. Bole under the name of the Bole Pump Company; that the said the Bole Pump Company for a period of years prior to said 19th day of February, 1913, had an account with said defendant corporation pertaining to the manufacture on behalf [35] of said the Bole Pump Company, of pumps and the like; that on or about the first day of January, 1913, said Bole Pump Company account on the books of said corporation showed an indebtedness to said de-

fendant corporation in approximately the sum of Ten Thousand Dollars (\$10,000); that prior to this time the relations between said defendants and said complainant Robert E. Bole had been generally friendly; that on or about the first day of January, 1913, demand was made by said defendant corporation upon said Robert E. Bole for a settlement of the affairs of the said the Bole Pump Company; that as a result thereof during the month of January, 1913, said Robert E. Bole assumed an attitude of antagonism and bitterness toward said defendants, and sent a certain communication to said defendant Elihu C. Wilson of an insulting and defiant nature entirely uncalled for by reason of the business demands made by said defendant corporation through said defendant Elihu C. Wilson, its president, upon said complainant Robert E. Bole, that such account between the said the Bole Pump Company and said defendant corporation be settled; that in said communication said Robert E. Bole did for the first time unjustly and falsely and maliciously assert to the defendants a right and interest in and concerning said invention, the subject matter of said pretended letters patent; that on or about the first day of February, 1913, said Bole Pump Company account and all matters of account and business relations between said Robert E. Bole and said defendants were settled, in connection with which and as a part of which said Robert E. Bole did withdraw and waive any claim of right of invention or interest whatsoever pertaining to the invention, being the said subject matter of said pretended letters patent, and did covenant at no time and in no manner to harm or injure or cause harm or injury to said defendants in connection with said invention or in any way to harass or trouble said defendants in connection with the subject matter of said [36] pretended letters patent in suit or any part thereof; that prior to this time last mentioned, and for at least a period of one year prior thereto, said defendants had made or caused to be made and manufactured, without protest from said defendant Robert E. Bole, a large number of under-reamers or devices containing or embodying the subject matter of said pretended letters patent, in the presence of and without protest from said Robert E. Bole; that in violation of the said covenant forming a part of the settlement between said Robert E. Bole and said defendants herein, entered into on or about the first day of February, 1913, said Bole did, if the allegations thereunto in the Bill of Complaint be true, immediately assign an undivided one-half interest in and to said invention, known by said Robert E. Bole to be the production and property of said defendant Elihu C. Wilson, and as to its embodiment in manufacture to be an important part of the business of said defendant corporation, to said complainant Edward Double, a sharp business competitor of said defendants, at that time and for a long period of time prior thereto, and thereupon prepared and filed in the United States Patent Office, with fraudulent intent, an application for said subsequently issued pretended letters patent; that said complainant Edward Double, by reason of said

assignment, as to any interest which he may have in said pretended letters patent and in the alleged cause of action herein or any part thereof is subjected to the covenant of said complainant Bole hereinabove set forth and subject to all conditions, limitations, restrictions, waivers and the like attaching to said interest or any part thereof and whether springing from any act or acquiescence or permission or disclaimer or allowance of said complainant Robert E. Bole or otherwise, with respect thereto; that on March 18, 1913, defendant herein, Elihu C. Wilson, did file an application in the United States Patent Office for, the subject matter of said [37] pretended letters patent; that on February 3, 1914, the Commissioner of Patents of the United States Patent Office did declare an interference as to priority of invention to exist between said application for letters patent for said invention so filed by said defendant Elihu C. Wilson and said pretended letters patent in suit; that proceedings have been had and taken therein on behalf of the parties conclusively tending to prove said defendant Elihu C. Wilson to be the original, first and sole and true inventor of the invention of said pretended letters patent hastily and improperly or inadvertently issued to said complainant Robert E. Bole, all of which has caused large expense and damage to said defendant Elihu C. Wilson; that said complainants and more particularly said complainant Edward Double and the business interests with which he is associated, being as before mentioned sharp competitors of the business interests of said defendants,

have, within the year last past, and within the Southern District of California and Southern Division thereof, and elsewhere, issued and uttered false and improper and damaging assertions to the trade and in the field and elsewhere, that said Robert E. Bole and not said Elihu C. Wilson is the true, lawful, original, first and sole inventor of said invention, all to the damage and hurt and injury of said defendants and particularly said defendant Elihu C. Wilson, and in violation of the covenant, waiver and disclaimer made and entered into by said Robert E. Bole as hereinabove recited on or about the first day of February, 1913, in favor of and for the purported protection of said defendants; and that by reason of such breaches of covenant by said complainants, and attaching to and surrounding and arising out of the transaction being the claim of infringement set forth in this Bill of Complaint, including the large and burdensome expense, annoyance and labor to which the defendant Wilson herein has been wrongfully subjected and put as hereinabove set forth, and such also as [38] concerns the defense of this present action, and to which said defendants are now being put and subjected, said defendants have suffered damages in the full sum of Seventy-five Thousand Dollars (\$75,000) and are now suffering great and irreparable damage and injury, all of which cannot be ascertained or determined properly save and except in this Court of Equity and in connection with the determination of the issues raised by the Bill of Complaint herein.

WHEREFORE, defendants pray to be hence dismissed with their reasonable costs and disbursements in this behalf sustained, together with judgment against said complainants in the said sum of Seventy-five Thousand Dollars (\$75,000) with interest.—

RAYMOND IVES BLAKESLEE, Solicitor and of Counsel for Defendants. Dated October 31, 1914. [39]

In the United States District Court, Southern District of California, Southern Division.

IN EQUITY—No. B–19.

ROBERT E. BOLE and EDWARD DOUBLE, Complainants,

VS.

WILSON & WILLARD MANUFACTURING COMPANY and ELIHU C. WILSON, Defendants.

Affidavit of Raymond Ives Blakeslee, Solicitor and Counsel for Defendants.

State of California, County of Los Angeles,—ss.

Raymond Ives Blakeslee, being duly sworn, deposes and says: That he is an attorney and counsellor at law, being solicitor and counsel for defendants in the above-entitled cause in equity; that the original answer to the Bill of Complaint herein contained an alleged counterclaim or setoff as to which motion was brought by complainants under Equity

Rule No. 33 to strike out such alleged counterclaim or setoff; that such motion came on for hearing before this Court the 28th day of October, 1914, and was granted; that in order to fully protect the rights of the defendants herein affiant deems it proper to insert within the Answer herein the amendatory matter of the annexed motion to amend the Answer herein, for the following reasons, to wit:

That the alleged counterclaim or setoff heretofore presented in the answer contained certain allegations with respect to a covenant, waiver or disclaimer on the part of the complainant Bole, which, having been stricken from the answer, as part of such alleged counterclaim or setoff, are necessary to be inserted within the answer proper as part of the proper defense to be interposed in this cause of action; that with respect to [40] said alleged counterclaim or setoff affiant has further considered Equity Rule 30 with respect to answers and counterclaims and setoffs and the like to be incorporated in such answers, and has discovered a further interpretation of such rule, in addition to and rendered subsequent to the judicial decisions jointly discussed by counsel on the hearing of said motion to strike out said counterclaim, and which is believed by affiant to warrant the entertainment and consideration by this Court of the elaborated counterclaim or setoff embodied in the proposed amendments to the answer set forth in the annexed motion; that said authority so referred to is the opinion of the Court in re Salt's Textile Mfg. Co. vs Tingue Mfg. Co., rendered October 4, 1913, in the District Court for the District of Connecticut, and reported in Federal Reporter Volume 208 page 156; that affiant believes that such decision should be considered by this Court in order that full justice may be done to and protection awarded to the defendants herein under said Equity Rule 30; that as to the remaining portions of the proposed amendments to the answer it is believed the same are properly interposed in order that the rights of the defendants be properly conserved and the business of this Court be prevented from the imposition of unnecessary or what may well or reasonably be unnecessary labor; and the granting of this motion to amend including the counterclaim or setoff therein interposed is solicited upon such just terms, within Equity Rule 19, as may properly be imposed, such Rule 19 so permitting such amendments at any time.

RAYMOND IVES BLAKESLEE.

Subscribed and sworn to before me this 31st day of October, 1914.

[Seal] FRANCIS L. ISGRIGG, Notary Public in and for the County of Los Angeles, State of California. [41]

[Endorsed]: In Equity. No. B-19. United States District Court, Southern District of California Southern Division. Robert E. Bole and Edward Double, Complainants, vs. Wilson & Willard Mfg. Co. and Elihu C. Wilson, Defendants. Notice of Motion, Motion and Affidavit thereon for Leave to Amend Answer, etc. Filed Nov. 2, 1914, Wm. M. Van Dyke, Clerk. By Chas. N. Williams, Deputy Clerk. Received a copy of the within Motion, Notice of Motion

and Affidavit, this 31 day of October, 1914. Frederick S. Lyon, Solicitor for Complainants. Raymond Ives Blakeslee, 728-30 California Building, Los Angeles, Cal., Solicitor for Defendants. [42]

[Order Granting Motion to Amend, etc.]

At a stated term, to wit, the January Term, A. D. 1915, of the District Court of the United States of America, in and for the Southern District of California, Southern Division, held at the court-room thereof, in the City of Los Angeles, on Friday, the fifteenth day of January, in the year of our Lord, one thousand nine hundred and fifteen. Present: The Honorable BENJAMIN F. BLEDSOE, District Judge.

No. B-19-EQUITY.

ROBERT E. BOLE-et al.,

Complainants,

VS.

WILSON & WILLARD MANUFACTURING CO.

Defendants.

This cause having heretofore been submitted to the Court for its consideration and decision on defendant's motion for leave to amend answer to the bill of complaint; and the Court having duly considered the same and being fully advised in the premises, it is ordered that said motion of defendant for leave to amend answer to the bill of complaint be, and the same hereby is granted. [Endorsed]: No. B-19—Eq. United States District Court, Southern District of California, Southern Division. Robert E. Bole, et al., Complainants, vs. Wilson & Willard Mfg. Co., et al., Defendants. Copy Order Granting Motion of Defendant for Leave to Amend Answer to Bill of Complaint. [43]

In the United States District Court, Southern District of California, Southern Division.

IN EQUITY—No. B-19.

ROBERT E. BOLE and EDWARD DOUBLE, Complainants,

VS.

WILSON & WILLARD MANUFACTURING
COMPANY and ELIHU C. WILSON,
Defendants

Reply.

The Reply of Robert E. Bole and Edward Double, Complainants in the above-entitled Suit to the alleged counterclaim or setoff of Elihu C. Wilson and Wilson and Willard Manufacturing Company, Defendants.

Complainants admit that for many years prior to February 19, 1913, complainant Robert E. Bole had certain business transactions and relations with the defendant corporation, and that among such business relations were certain business transactions carried on under the name of the Bole Pump Company; denies that at any time complainant Robert E. Bole was indebted to said defendant corporation, in the sum

of Ten Thousand Dollars, or in any sum whatever in excess of Five Thousand Dollars; denies that on the first day of January, 1913, or at any time during January, 1913, complainant Robert E. Bole assumed an attitude or bitterness towards either of said defendants, or sent the alleged or any communication [44] to defendant Elihu C. Wilson, either of an insulting or defiant nature, either entirely uncalled for, or otherwise;

Complainants allege that the matters of business and the said Bole Pump Company's account between complainant, Robert E. Bole, and said defendant corporation, were settled by a contract in writing; denies that in the said pretended communication complainant Robert E. Bole, did for the first time, either unjustly, or falsely, or maliciously, or in any other manner assert to the defendants or either of them, a right or interest in or to said invention, the subject matter of said letters patent No. 1,080,135. On the contrary complainants allege that complainant Robert E. Bole continuously asserted that he was the inventor of said invention and that defendant Elihu C. Wilson had full knowledge of such invention by said Robert E. Bole and of said Robert E. Bole's claim as the inventor thereof, for years prior to January, 1913.

Complainants deny that on or about the first day of February, 1913, or at any time, complainant Robert E. Bole, either as alleged in defendants' alleged counterclaim or setoff, or otherwise, or at all, did withdraw or waive or agree to withdraw or waive any claim of right of invention or interest whatso-

ever pertaining to the said invention, or did covenant or agree at no time or in any manner to harm or injure, or cause harm or injury to said defendants, or either of them, in connection with said invention or in any way harass or trouble any of the defendants or either of them, in connection with the subject matter of said pretended letters patent in suit or any part thereof as alleged by defendants or otherwise or at all. [45] Admits that with the consent of complainant Robert E. Bole, and prior to January 1, 1913, defendants made or caused to be made and manufactured and sold a number of under-reamers or devices containing or embodying the said invention.

Complainants deny that in violation of the said alleged covenant alleged by defendants to form a part of the settlement between complainant, Robert E. Bole, and defendants, complainant Robert E. Bole did any act or thing whatsoever calculated to cause damage or injury to the defendants, or either thereof, or which has caused any damage or injury to defendants or either of them, either as alleged in said alleged counterclaim or setoff, or otherwise or at all.

Complainants deny that in the alleged interference proceedings pending in the United States Patent Office any proceedings have been had or taken conclusively tending to prove defendant Elihu C. Wilson, to be the original, first, or sole, or true inventor of the said invention. On the contrary, complainants allege that the said interference proceeding is still pending undecided and undetermined

in the United States Patent Office and that said Elihu C. Wilson voluntarily filed the alleged application for letters patent and caused said interference proceedings to be instituted;

Complainants deny that either of these complainants either within the Southern District of California or elsewhere, have issued or uttered any false or improper or damaging assertion or assertions, or any assertions whatever to the trade or in the field or elsewhere, that said Robert E. Bole and not said Elihu C. Wilson is the true, lawful, original, first, or sole inventor of said invention, either with or without any intent to damage or hurt or injure said defendants, [46] or either thereof or in violation of the alleged covenant, waiver or disclaimer alleged in said pretended counterclaim or setoff of defendants; complainants deny that any act of either of complainants in the premises has caused any damage or injury whatsoever to complainants, or either thereof.

Complainants deny that the defendants, or either thereof, have suffered damage or injury in the sum of Seventy-Five Thousand Dollars (\$75,000.00) or in any sum whatsoever by reason of any act of these complainants, or either thereof; deny that defendants, or either of them, are now suffering or will suffer great or irreparable damage or injury by reason of any wrongful act of these complainants, or of either of these complainants.

WHEREFORE complainants pray judgment of this Court that defendants take nothing by their alleged counterclaim or setoff and that complainants have the relief prayed for in their Bill of Complaint herein.

ROBERT E. BOLE and EDWARD DOUBLE,
By FREDERICK S. LYON,

Their Counsel.

FREDERICK S. LYON,

Solicitor and of Counsel for Complainants.

[47]

State of California, County of Los Angeles,—ss.

Lora M. Bowers, being first duly sworn, deposes and says that she is a stenographer in the employ of Frederick S. Lyon and of legal age; that on Tuesday, February 23, 1915, she served the attached Reply upon Raymond Ives Blakeslee, solicitor for the defendants in the above-entitled suit at his office 728-30 California Building, in the City of Los Angeles, California, by handing to and leaving with Alfred Dahler, a draftsman in the employ of said Raymond Ives Blakeslee, a true and correct copy of said Reply, said Alfred Dahler being then and there in charge of the office of said Raymond Ives Blakeslee.

LORA M. BOWERS.

[Seal] WILLIAM W. BEARMAN, Notary Public in and for the County of Los Angeles.

[Endorsed]: No. B-19. United States District Court, Southern District of California, Southern Division. Robert E. Bole and Edward Double, Complainants, vs. Wilson and Willard Manufacturing Company and Elihu C. Wilson, Defendants. In Equity. Reply. Filed Feb. 24, 1915, Wm. M. Van Dyke, Clerk, By R. S. Zimmerman, Deputy Clerk. Frederick S. Lyon, 504-7 Merchants Trust Building, Los Angeles, Cal., Counsel for Complainants. [48]

[Interlocutory Decree.]

United States District Court, Southern District of California, Southern Division.

IN EQUITY—No. B-19.

ROBERT E. BOLE and EDWARD DOUBLE, Complainants.

VS.

WILSON and WILLARD MANUFACTURING COMPANY and ELIHU C. WILSON,

Defendants.

This cause having come on for trial and final hearing before the Court on March 23, 1915, Frederick S. Lyon, Esq., appearing on behalf of complainants and Raymond Ives Blakeslee, Esq., and Frederick A. Stephenson appearing on behalf of defendants and the Court having heard the testimony of the witnesses on said day and on March 24, 1915, March 25, 1915, March 26, 1915, March 27, 1915 and April 12, 1915, and having heard and considered the arguments of counsel and the testimony and proofs produced upon behalf of the parties, it is ordered adjudged and decreed:

1. That complainant Robert E. Bole was the original, first and sole inventor of that certain new and useful under-reamer described, set forth and

claimed in letters patents of the United States No. 1,080,135, granted December 2, 1913; that the same was not known or used by others before his invention or discovery thereof or patented or described in any printed publication in the United States of America or in any foreign country [49] before his invention or discovery thereof, or more than two years prior to his application for said letters patent in the United States of America, or in public use or on sale in the United States of America for more than two years prior to his said application for said letters patent and not abandoned by him, and that neither said Robert E. Bole nor his legal representatives or assigns had prior to the filing of his said application for said letters patent of the United States, filed or made any application for letters patent thereon in any country foreign to the United States.

2. That said complainant Robert E. Bole, made due application in writing in due form of law to the Commissioner of Patents of the United States of America for letters patent upon the said invention, and on February 12, 1913, by an instrument in writing in due form of law duly signed by said Robert E. Bole, and by him delivered to complainant Edward Double, did sell, assign, transfer, and set over unto complainant Edward Double, an undivided one-half (1/2) part of the full and exclusive right, title and interest in and to the said invention and the letters patent to be granted and issued therefor, and did authorize the Commissioner of Patents of the United States of America to issue said letters patent jointly to Complainants, their heirs, legal representatives

and assigns; that thereafter said letters patent of the United States, to wit: No. 1,080,135, were on December 2, 1913, duly and regularly granted, issued and delivered by the Government of the United States of America to complainants; that there was thereby secured and granted to complainants for the full term of seventeen years from and after December 2, 1913, the sole and exclusive right, liberty and privilege of making, using and vending to others to be used the [50] said invention throughout the United States of America and the Territories thereof.

3. That the defendants herein, Wilson & Willard Manufacturing Company and Elihu C. Wilson, have on December 2, 1913, and on divers days and dates thereafter and prior and subsequent to the filing of the Bill of Complaint herein and within the Southern District of California, to wit, in the County of Los Angeles, California, made and sold to others to be used, and are now making and selling to others to be used, under-reamers embodying, containing and embracing the invention described, set forth and claimed in and by said letters patent No. 1,080,135, without the license or consent of complainants or of either of complainants and in violation and in infringement of said letters patent and of each of the claims thereof; that the so-called Wilson improved under-reamer like "Defendants' Exhibit 1" manufactured and sold by defendants were and are infringements upon said letters patent and each of said under-reamers contained or contains in it the said patented invention.

- 4. That complainants are the owners of said letters patent and of the full and exclusive right, title and interest therein and thereto and that defendants and each of them have at all times had full knowledge and notice of said letters patent and of the rights of complainants therein and that the manufacture and sale by them of said so-called Wilson improved under-reamers was an infringement upon and violation of said letters patent.
- 5. That complainants recover of the defendants and each of them the profits, gains and advantages which defendants and each of them have or has derived, received or made by reason of said infringement, and that complainants recover of the said [51] defendants and each of them any and all damages which complainant or either of them have or has sustained or shall sustain by reason of said infringement by defendants or either of them.
- 6. And it is hereby referred to Lynn Helm, Esq., as Master of this court, who is appointed pro hac vice, to take and state the account of said gains, profits and advantages and to assess such damages and to report thereon with all convenient speed, and the said Wilson & Willard Manufacturing Company and Elihu C. Wilson, their attorneys, officers, clerks, servants, agents, workmen, associates and employees are hereby directed and required to attend before said Master from time to time as he may require and to produce before him such books, papers, vouchers, documents, records or other things and to submit to such oral examination as the Master may require.
 - 7. That a perpetual injunction issue out of and

under the seal of this court directed to the said defendants Wilson & Willard Manufacturing Company and Elihu C. Wilson, their and each of their officers, attorneys, agents, servants, workmen, clerks and associates, enjoining and restraining them and each of them from directly or indirectly making or causing to be made, using or causing to be used, selling or causing to be sold, or otherwise disposing of in any manner any under-reamer or device containing or embodying or employing the said invention granted and patented in and by said letters patent No. 1,080,135, or any device or machine capable of being combined or adapted to be used in infringement of said letters patent or of the claims thereof in any manner whatsoever, and from making or causing to be made, using or causing to be used, selling or causing to be sold or otherwise disposed of in any manner any machine like the [52] so-called Wilson Improved Underreamer in evidence in this cause.

- 8. That defendants take nothing under defendants' alleged counterclaim herein and judgment thereon is hereby rendered in favor of complainants and against defendants, and each of them.
- 9. That complainants do have and recover judgment against defendants, Wilson & Willard Manufacturing Company and Elihu C. Wilson, and each of them, jointly and severally, for the sum of One Hundred Five and 15/100 (105.15) Dollars, complainants' costs and disbursements of this suit, and that the further questions of increase of damages be reserved until the coming in of the Master's report.

Dated at Los Angeles, California, April 16th, 1915. OSCAR A. TRIPPET,

District Judge.

Decree entered and recorded April 16, 1915.

WM. M. VAN DYKE,

Clerk.

By Leslie S. Colyer, Deputy Clerk.

[Endorsed]: No. B-19—Eq. United States District Court, Southern District of California, Southern Division. Robert E. Bole and Edward Double, Complainants, vs. Wilson & Willard Manufacturing Company and Elihu C. Wilson. In Equity. Interlocutory Decree. Filed Apr. 16, 1915. Wm. M. Van Dyke, Clerk. By Leslie S. Colyer, Deputy. Frederick S. Lyon, 504–7 Merchants' Trust Building, Los Angeles, Cal., Counsel for Complainants. [53]

[Opinion.]

In the United States District Court, Southern District, State of California.

IN EQUITY.—No. B-19.

ROBERT E. BOLE and EDWARD DOUBLE, Complainants,

VS.

The WILSON & WILLARD MANUFACTURING COMPANY and E. C. WILSON,

Defendants.

Tuesday, April 13, 1915, 10 o'clock A. M. (After argument by defendant's counsel.)
The COURT.—In the case on trial I do not care

to hear any further argument. I have carefully considered the evidence, and listened patiently to the arguments of counsel for the defense. I am thoroughly convinced that the complainant, Bole, invented the key in controversy, and is justly entitled to a patent. If there had not been a patent issued in the case, or if the patent had been issued to the defendant, I should decide this case in favor of the complainant Bole.

There has been a good deal of criticism indulged in concerning some of these witnesses who have testified in favor of Bole, particularly Adams and Heber. I do not see any reason for their being criticised. If a man wants to fix up evidence it seems to me that he would fix up evidence more material than those witnesses were able to testify to. In regard to the drawing that has been introduced in evidence, and which has been criticised as a fabrication. If Mr. Bole wanted to fix up evidence for the purpose of perjuring himself, and to have other [54] people perjure themselves, he would have gotten evidence along that line that was more material. Of course, these are material in a way, but they are not, in any sense, controlling.

Mr. Bole has been criticised for not being industrious and active in his application for a patent. Nothing was done with it from the time he conceived it in his mind and suggested it to these witnesses who have testified in his favor, except to write the letter to Mr. Willard, sometime prior to 1911. In that letter he asked that practical use be made of the conception, but the defendant would not adopt the inven-

tion. The complainant Bole was not in the business of manufacturing reamers; he could not put the conception to practical use without going to competitors of his business associates, Wilson & Willard Manufacturing Company. He was not in a situation to put it into practical use until his relations with that company were severed. He applied to the defendant to put the key into use. Of course, until it was tried out it would be nonsensical to apply for a patent. He had no opportunity to apply for a patent, associated as he was with Wilson & Willard, unless they would try it out. I think that entirely excuses his delay down to 1911. From that time on the key was put into practical use, and kept in use until the patent was applied for, within two years. From the time of the use of the key, if there is any negligence attributable to anybody for not applying for a patent sooner, Wilson was as negligent as Boles; probable more so. He was more interested in it, probably, if he was the inventor, than Bole was. He does not make any explanation why he waited nearly two years to apply for a patent. The letter that Bole wrote to Wilson, when he got into a controversy with him, is, it sems to me, the most natural thing in the world for him to do, in that he makes claim that he will not let Wilson use the invention any longer, or words to [55] that effect. I think it was a very unnatural and unusual thing for Mr. Wilson to do, if he claimed to be the inventor of that key,—to make a settlement with Bole, without including in that settlement the controversy concerning the key. It was very unbusinesslike and very unnatural.

I have not the slightest doubt about how to decide this case, and I decide it in favor of the complainants.

[Endorsed]: No. B-19—Eq. U. S. District Court, Southern District of California. Robert E. Bole and Edward Double, Complainants, vs. The Wilson and Willard Manufacturing Company, and E. C. Wilson, Defendants. Opinion of Court. Filed Apr. 24, 1915. Wm. M. Van Dyke, Clerk. By T. F. Green, Deputy Clerk. [56]

In the United States District Court Within and for the Southern District of California, Southern Division.

IN EQUITY—No. B-19.

ROBERT E. BOLE and EDWARD DOUBLE, Complainants,

vs.

WILSON & WILLARD MANUFACTURING COMPANY and E. C. WILSON,

Defendants.

Reporter's Transcript. VOLUME I.

Filed Apr. 21, 1915. Wm. M. Van Dyke, Clerk. By Chas. N. Williams, Deputy Clerk. [57]

INI	OEX.					
COMPLAINANTS' CAS	SE:					
Patent No. 1,080,135.				$\dots 2$		
DEFENDANTS' WITNESSES:						
	Direct	Cross	Redr.	Recr.		
E. C. Wilson	19	85	114	117		
			118	118		
			119			
Wm. G. Knapp	120	137	145	150		
Chas. E. Wilcox	152	165	175			
W. W. Wilson	179	198	203			
A. G. Willard	205	208	348	349		
A. G. Willard						
(Testimony in Inter-						
ference Proceeding						
No. 37,126)	212					
INDEX TO EXHIBITS.						
"Complainants' Exhibit 'A'"—						
Letters Patent of the United States No.						
1,080,135, dated December 2, 1913, issued to						
Robert E. Bole and Edward Double						
"Complainants' Exhibit 'B'"—						
Letters Patent No. 827,595, dated July 31,						
1906, issued to Elihu	C. Wilso	n		. 114		
"Defendants' Exhibit	Singl	e-Piece	Ke	y		
Reamer''				. 24		
"Wilson Exhibit Photo	A of V	Wilson	Reame	er		
Two-Piece Key Device and Wilson Exhibit						
Photo B of Two-Piece Key Device" 25						
"Wilson's Exhibit Febr	•					

Robert E. Bole and Edward Double.	55
Willard Manufacturing Company Shop	
Record Slips."	
(For Identification)	46
'Wilson Exhibit Wilson Reamer Key and Tee	
Sketch of 1911." (For Identification)	46
'Defendants' Exhibit Pacific Iron Works Let-	
ter of January 28, 1911." (The Williams	
letter)	50
[58]	
INDEX OF EXHIBITS, Volume 1 (Continued).
'Defendants' Exhibit Pacific Iron Works, Jan-	
uary 26, 1911, Shop Order Slips'' (Marked	
Defendants' Exhibit No. 2)51 and	52
'Defendants' Exhibit B, Specimens of Grigs-	
by's Handwriting or Shipping Receipts of	
May 25, 1911"	53
'Defendants' Exhibit Wilson Reamer Shop	
Blue-prints of Tracings of May 6, 1911, and	
June 2, 1911''	56
'Defendants' Exhibit Wilson Reamer Booklet	
of 1911''	61
'Defendants' Exhibit Putnam & Valentine Paid	
Photographic Account''	62
'Defendants' Exhibit Wilson Reamer Booklet	
J 1	62
'Bole Letter of January 17, 1911''	66
'Defendants' Exhibit Certificate of Patent	
Office as to Wilson vs. Bole Interference"	71
Shop Tracings of May and June, 1911, of Wil-	
son Under-reamer with the Single-Piece	
Key"	80

"Defendants' Exhibit Order Papers and	
Sketches Pertinent to the Making over of	
Reamer 120," Order No. 6,904, together	
with the Shipping Envelop. (Marked De-	
fendants' Exhibits 6 and 7)	127
"Defendants' Exhibit Shop Order Slips Perti-	12.
nent to the Making Over of Reamer 120,"	
with the shop envelop of same. (Marked	
*	128
Reproduction	128
"Defendants' Exhibit Knapp Single-Piece Key	100
Reproduction	128
"Defendants' Exhibit Wilson Reamer Tee and	
Key Sketch of 1911"	136
"Defendants' Exhibit Chas. E. Wilcox Key Re-	
production Sketch''	160
"Wilson Reamer Block Elevating Lever."	
(For Identification)	164
(Defendants' Exhibit 9)	190
"Certified Copy of File-wrapper in the Matter	
of the Application of E. C. Wilson for	
Improvement in Under-reamers." (Of-	
fered as Exhibit 10; offer deferred)	.177
"Defendants' Exhibit W. W. Wilson Key Re-	
production Exhibit''	187
Letter, Wilson & Willard Manufacturing Com-	
pany to J. A. Kibele, February 28, 1911	82
[59]	

In the United States District Court Within and for the Southern District of California, Southern Division.

IN EQUITY—No. B-19.

ROBERT E. BOLE and EDWARD DOUBLE, Complainants,

VS.

WILSON & WILLARD MANUFACTURING COMPANY and E. C. WILSON,

Defendants.

Tuesday, March 23, 1915.

APPEARANCES:

FREDERICK S. LYON, Esq., Counsel for Complainants.

RAYMOND IVES BLAKESLEE, Esq., and FREDERICK A. STEPHENSON, Esq., Counsel for Defendants.

The COURT.—Bole vs. Wilson & Willard Manufacturing Company.

Mr. LYON.—The complainant is ready.

Mr. BLAKESLEE.—The defendant is ready. In that case I wish to ask that there be associated with me as counsel for the defendants, Mr. Frederick A. Stephenson, a member of this bar.

The COURT.—I believe the order should be that there be a substitution of attorneys, of yourself and Mr. Stephenson instead of yourself. Is that not the usual order, Mr. Clerk?

The CLERK.—That is the usual order.

Mr. BLAKESLEE. Mr. Stephenson will not be

STRICKEN, PER ORDER OF APRIL 26,

thereby made solicitor of record, but we will both be counsel of record.

The COURT.—Oh, I do not know whether that distinction is maintained under the new rules or not. I think under the [60*—1†] new rules there is no distinction of that kind maintained. Still I am not as familiar with the matter as I ought to be, I suppose.

Mr. BLAKESLEE.—In this case, your Honor, we have an offer to make. The suggestion was made by counsel for complainant that this case be tried upon the record made in the United States Patent Office in the interference between the complainant Bole, and the defendant Wilson, pertinent to an issue raised in this suit, namely, the issue as to priority of invention. The party Wilson having an application pending in the United States Patent Office in interference with the patent of the complainant Bole, as to which we argued, as your Honor will remember, last week on motion for continuance, we now wish to make formal offer that the proofs in that case and record in that case with the exhibits, which I understand have come from the Patent Office, be filed in this case and that this case be determined upon such records and proofs and exhibits, with the additional submission of briefs or argument, as your Honor may desire.

Mr. LYON.—Counsel having over three weeks ago refused to so stipulate, we decline to so stipulate at the present time.

^{*}Page-number appearing at foot of page of certified Transcript of Record.

tOriginal page-number appearing at foot of page of Testimony as same appears in Certified Transcript of Record.

Mr. BLAKESLEE. I may state further that I have been informed by wire that that matter has been concluded in the Patent Office, at least before the first tribunal, and a decision has been rendered and the situation has somewhat changed. Therefore, we make that offer now for what consideration the counsel may want to give it.

The COURT.—The offer and stipulation seems to be declined and the Court has no power to enforce it. I would like for counsel to state briefly and yet clearly enough for me to understand, the issues, before we start into the trial.

Mr. LYON.—Appearing on behalf of the complainant, I will state that this is the usual suit for infringement of a patent, [61-2] for an injunction, and for an accounting of profits and damages, the bill being in the usual form setting forth that Robert E. Bole was the inventor of a certain improvement in under-reamers; that he made due application to the United States Patent Office as provided in the statutes for letters patent upon such invention; that such application was made and duly filed in the United States Patent Office on February 19, 1913. Paysing there for a moment, the answer admits the filing of that application at that time. That will be one of the material admissions of the answer to which your Honor's attention will be particularly directed during the trial. Of course, the defendant does deny that that application was anything but a fraudulent application; but he does not deny that the application was made and made in due form of law. That thereafter and before the STRICKEN, PER ORDER OF APRIL 26, 1915. issuance of the patent the complainant and inventor Bole assigned an undivided one-half interest in the invention to Edward Double of this city; that thereafter, and on December 2, 1913, letters patent of the United States No. 1,080,135 were duly granted and issued to Mr. Bole and Mr. Double, for said invention. That allegation is not denied save and except as to the conclusion that it was duly granted.

The next allegation of the Bill of Complaint which is material here is the allegation that the defendants Wilson & Willard Manufacturing/Company and Elihu C. Wilson have been since the granting, issuance and delivery of said letters patent, and without the license or consent of the patentees, or either of them, making, using and selling under-reamers embodying this invention. The answer in that respect admits that both of the defendants have since the issuance of the patent been making, using and selling under-reamers embodying said invention. Thev allege that consent or license is not necessary. going through these particular allegations for the moment, to show your Honor that there is only one issue in the case, and I will come to what the [62-3] invention pertains to in a moment. The answer also admits that the defendants intend to and have been continuing to manufacture, use and sell in the United States of America and in the Southern District of California under-reamers embodying the invention set forth, described and claimed in the said letters patent. The defense in this case is that Robert E. Bole was not the original or sole inventor of said invention, but that Elihu C. Wilson,

one of the defendants, was the inventor. Stripped of all verbiage, that is the issue in this case.

The COURT.—What is that?

Mr. LYON.—That instead of Bole being the inventor that Wilson was the inventor, and that Mr. Bole's application was a fraudulent application, he knowing that Wilson was the inventor, and that he filed the application for that which he knew to be Wilson's invention. There is, perhaps/another defense urged, that is, that at the time when in 1913 certain settlements were made between the Wilson & Willard Manufacturing Company and Robert E. Bole, Bole agreed that the Wilson & Willard Manufacturing Company could continue the use of the invention. That is a separate and distinct defense. There is an alleged counterclaim, which so far as complainants are concerned, is immaterial to state at this time, but it is based upon an alleged circularization of the trade that the Wilson & Willard Manufacturing Company were infringing the Bole patent. As to such counterclaim, when it is urged we shall raise the objection that it is not a counterclaim under the statute or under the new Equity Rules; that it is a counterclaim over which this Court has no jurisdiction, if it be a counterclaim.

The COURT.—That is, you regard it as a trespass?

Mr. LYON.—Yes. Furthermore, and particularly, that it is a matter which even if it were a cause of action under proper circumstances, it is one which until they have succeeded in [63—4] getting a patent, states no cause of action.

STRICKEN, PER ORDER OF APRIL 26, 1915. As outlined in my statement of the case, your Honor will see that in this case the burden of proof is on the defendant all the way through. It will only be necessary under these allegations for us to offer in evidence the original letters patent granted to us, as they are prima facie valid and as they prove all of the antecedent steps, the application for patent, the assignment, and the issue of the patent. As the use by the defendants is admitted and their intention to continue to use is admitted, there is no need of evidence as to that. There is no need of evidence as to the use by the defendants or either of them being against the complainants' will or without their license or authority, for that is admitted. So our case is made when we offer in evidence the original letters patent. The defense is entirely an affirmative one and under the statutes must be proven beyond a reasonable doubt.

The COURT.—Is that your statement, that it must be proven beyond a reasonable doubt?

Mr. LYON.—Any defense to a patent must be proven beyond a reasonable doubt—any affirmative defense against the validity of the patent. That is a general rule of law. There are only one or two decisions which say "by convincing proof," but our Circuit Court of Appeals have used the term in two or three cases recently "beyond reasonable doubt," and I will call your Honor's attention to those decisions.

The invention involved in this case is an extremely simple one. It does not involve the whole of the under-reamer. An under-reamer perhaps your

Honor is familiar with such a tool is a device used in the drilling of oil wells by the so-called standard or cable-tool system, in which system the hole is made by a reciprocation of the string of tools upward and downward, and the dropping of the tools on the bottom of the hole grinds [64-5] up the earth or earthy matter into a fine dust or mud, when mixed with water, and by that means the hole is made, and by the baling out of the muddy water the detritus is removed from the hole. In California and in some other portions of the country, due to the fact that the earth is not of rock formation as in Pennsylvania and some portions of West Virginia, and so forth, it is necessary to case off or enclose in pipe the hole. In other words, to put a pipe down or casing down to make the wall of the well stand up and prevent caving in. So that the casing is carried down as the drilling progresses. In this part of the country hard strata of shale or ledges of rock, shuncks of boulders sticking in the patch of the hole, must be drilled. When using the cable-tool system, the ordinary drilling bit is necessarily, then, of smaller diameter than the casing through which it has been moved to the bottom of the well. The casing during the drilling is held up from the bottom of the well hole a suitable distance.

The COURT.—What is that?

Mr. LYON.—The casing in the well hole with this method of drilling is held up from the bottom or undrilled portion a suitable distance, anywhere up to sometimes 40 feet, to allow the drop, and the drill cuts only a hole smaller than the casing through

which it has been entered into the hole. A device therefore is necessary when we come to the hard shell formations or rock, or where there is a boulder sticking in the way, to under-ream or cut out the hole below the casing larger than the casing, and that is an expanding bit which would expand out after it has been lowered through the casing and it will make the hole larger than the casing to allow the well pipe to be lowered. That kind of a device is called an under-reamer.

In this suit we are not interested in or concerned with any portion of the under-reamer save one feature of it. An under-reamer, [65—6] may have noticed from following my remarks, is broadly a device made so that the bits will expand out and cut the hole larger than the hole through which the under-ream has come. Now, it is necessary, of course, when that bit is brought back out, that those cutters, or bits as they are sometimes called —sometimes called knives—shall again contract so as to come up through the casing. Constant use of those bits dulls them and they must be resharpened. They must also be kept out to size, or the underreamed portion of the hole will taper down until the casing cannot follow. So that in under-reaming, and with the use of the tool, such a tool must be provided as can be readily dissembled or taken apart, and taken apart so that the cutters can be taken out and/either new cutters put on or those resharpened which have been used in the device.

/ As the evidence in this case will disclose, underreamers have been in use for years in California prior to this invention. The Wilson & Willard Manufacturing Company had been manufacturing the Wilson under-reamer. It had been manufactured from 1904 or five to 1911 before this invention was produced. The object of this invention was to simplify and perfect the removal of the spring-actuated parts and the moving parts used in expanding the bits and drawing the bits back into expanded position to allow their projection into and through the well casing and drawing back out of the well casing.

The COURT.—State that over again.

Mr. LYON.—The object of this invention was to simplify those parts of the under-reamer which permitted the ready removal of the bits and connecting the bits with the spring-actuated parts which actuated the bits in expansion and contraction. I will illustrate that by one of the reamers which can be taken apart in a moment. The invention relates solely in this case, so far as the Court need give it any consideration, to simply the device for holding and releasing those parts. [66—7]

Mr. BLAKESLEE.—We have produced a specimen of our manufacture alleged to infringe, and will stipulate when the time comes that we have been making and selling it.

(Mr. Lyon thereupon goes to the reamer in question and dismantles it and explains it to the Court.)

Mr. LYON.—As I said before, the invention of the patent in suit pertains solely to the ready means for releasing the cutters or bits and the spring-actuated rod and spring, so that the bits may be readily taken

off or readily put on in place.

The COURT.—What do you mean by "actuated"? Mr. LYON.—"Actuated," in that sense, is the fact that when the tool slides out of the end of the casing at the bottom of the well, automatically then this spring that is in there draws the bits up and outward into expansion. In other words, it is the actuation of the bits from the position which we showed your Honor when they were drawn down out to their expanded or reaming position. We neglected to show your Honor on that device the fact that each one of those bits is provided with an outward shoulder which contacts with the lower portion or end of the well casing, so that when it is desired to draw the tool out the casing holds against the bit until the bits have drawn down against the tension of the spring and drawn to a collapsible position, and allow the whole tool to go through the casing.

With that opening statement the complainants offer in evidence letters patent of the United States.

The COURT.—Hadn't I better hear from the

Mr. LYON.—This is our complete case and they can make their statement afterwards. We offer in evidence letters patent of the United States No. 1,080,135, dated December 2, 1913, issued to Robert E. Bole and Edward Double for under-reamers.

(Exhibit marked Complainant's Exhibit "A.")
Mr. LYON.—Complainants rest. [67—8]

Mr. BLAKESLEE.—Does your Honor desire that I should explain that structure to you before we go on?

The COURT.—I think I understand it. I flatter myself that I understand the mechanism of it.

Mr. BLAKESLEE.—Our defense is, you Honor, the invention having been set forth and we having admitted that we used the invention and having ad-

The COURT.—You used this thing that they have a patent on?

mitted-

Mr. BLAKESLEE.—We used it, lock, stock and barrel, the whole thing, and we do not deny that the subject of that patent is an invention. In fact, we admit that. We do not attack the validity of the patent upon the ground that it does not cover a patentable invention within the statutes. The statute. section 4886, prescribes those things which are patentable. But we make the defense and present the defense, first, that Bole, the patentee, was not the inventor in any respect, was not the sole inventor, nor the original inventor, nor the true inventor; and the further defense that—the first defense rather resting upon the fact that the thing was old when he applied for a patent. Now, the statutes provide that a thing must be new and useful to be patentable. A thing may be used by the inventor up to a period of two years prior to the time he applies for a patent and still/the patent would be valid in spite of such prior use. If used over two years it will not be valid, and le cannot properly apply. We contend as our first defense that this reamer with this key in had been manufactured, sold and used by the defendant corporation and the defendant Wilson for a period of over a year and a half before Bole applied.

The COURT.—A year and a half?

Mr. BLAKESLEE.—Over a year and a half.

The COURT.—It did not reach the two years?

Mr. BLAKESLEE.—It did not reach the two years. But, as I shall [68—9] be able to show your Honor, if the invention had been embodied in a working construction and only one working construction prior to the date of his application, and that working construction had been a successful working construction, his patent would be invalid if he could not prove that he had made the invention prior to the reduction of the invention to practice or the completion of this successful working thing.

The COURT.—State that again. I don't know

whether I understand you.

Mr. BLAKESLEE.—It is a proper defense to a patent suit in attacking the validity of the invention to show that a single specimen of the thing patented had been produced prior to the date of the application for the patent. In other words, that the invention had been made—

The COURT.—By someone else.

Mr. BLAKESLEE.—By someone else, prior to the date of the application.

The COURT.—And had been successfully used.

Mr. BLAKESLEE.—And had been successfully used or was a successful embodiment of the invention. We therefore, as our first defense, contend that the patent in suit is invalid on the ground that the element of novelty was lacking when Bole applied for—

the patent. In other words, that the invention had been manufactured and sold and successfully used with the knowledge of the patentee, the applicant, for over a year and a half prior to the time he applied. Now, that defense is really separate and distinct from the other defense that the defendants, Wilson & Willard Manufacturing Company and Wilson, who so produced and sold and caused the successful operation of these under-reamers were, per the defendant Wilson, the inventors and originators of this key. There is a distinction there. Wilson might have gotten his information of this thing from abroad or from [69—10] some source of orgination apart and distinct from himself, in which case he could not enter and this fourt could not entertain the defense, that he Wilson, was the real originator of this invention. But inventor or in this case we have the defense and make the contention that Wilson was the originator of this invention, and not Bole, and that is our second defense. Our third defense is that Bole at the time of a certain settlement with the defendant did by covenant, agreement and waiver put himself into such a position that he is estopped to urge the claim of infringement or to ask for an accounting for damages or an injunction against these defendants.

As to the second defense that Wilson was the original inventor, it remains to be stated briefly that the defendant Wilson filed an application for a patent on this same invention. That matter we went into to some extent last week on the argument of the motion for a continuance of this case. That applica-

tion by the defendant Wilson was filed by him twenty-seven days after the application for patent was filed by the complainant Bole. The application by Bole was filed February 19, 1913, and the application by the defendant Wilson was filed March 18, 1913. Those applications were copending in the Patent Office in the neighborhood of eight months prior to the issuance of the patent to Bole.

It is customary and provided for under the rules of the Patent Office to declare what is known as an interference proceeding or proceeding whereby shall be established the priority of the invention as between two conflicting applications, or between an application and a conflicting issued patent. It is the practice of the Patent Office to declare these interference proceedings so that these questions of priority or questions directed to the determination as to which of the two or more parties claiming the same invention was the original inventor, before any patent [70—11] issue to either of such parties on such invention. The authorities in the Patent Office were derelict in the performance of their duty, or, at least, showed an inadvertence and an improper attention to the applications pending for this particular device, in that they did not declare such in interference proceeding. In fact, the patent to Bole was issued before this interference proceeding was declared, and it was only declared after we had called the attention of the Patent Office to the fact that this Bole patent had slipped through the office without any such declaration of interference being made, in spite of the fact that both parties applicant were claiming the

STRICKEN, PER ORDER OF APRIL 26, 1915.
same invention, that the disclosures and drawings were almost identical, and, in fact, we shall show that the drawings of the Bole application were made from a specimen of reamer produced by the defendant. So that the Bole patent was issued inadvertently and by mistake, and without a determination of this question of priority, and it is because of that inadvertence and mistake or oversight on the part of the Patent Office that the complainant now has the slight vestige of advantage over the defendant in that he has a If the Patent Office had proceeded in the usual course as to these interfering applications, an interference proceeding would have been instituted before the Bole patent issued and only one patent would have been issued by the Patent Office. Now, if Wilson prevails in the interference proceeding which is now pending between his application and the Bole patent, a patent will of necessity be issued in due order of business to the defendant Wilson and then a proceeding will have to be brought under Section 4918 of the Revised Statutes in this court to ask for the cancellation and voiding of one of such patents. Now, it follows that if that interference had been duly declared this suit could not have been brought until a determination of the issues of that interference, and it might never have been brought, [71 and would never have been brought if the party Wilson had prevailed. I am not able to state with a proper showing from the standpoint of what is proper evidence that that interference proceeding has been determined before the tribunal of first resort and that the party Wilson has prevailed. But I have

a telegram received yesterday from my associate in

Washington which is as follows: "Interference-"

Mr. LYON.—If your Honor please, in that connection, as we shall have an objection as to the proper evidence of these facts, I do not think it is competent for the Court to hear secondary recitals of that fact. My position is that if there is any such decision, a certified copy of the decision should be presented; and, furthermore, I shall object to such copy of such decision on the ground that the same is not final and that it is not even a decision and no judgment, and, further, that it is not binding on this Court and that it is the duty of the Court to independently judge this question, as I argued before, and I object to counsel reading something which he cannot file in evidence in Court. [72—13]

The COURT.—I don't think those telegrams are admissible in evidence.

Mr. BLAKESLEF.—I am not offering them in evidence, and I didn't assume counsel would take the position that the usual course of business as between our associates in Washington and ourselves as to advice as to the termination of proceedings there was improper to refer to in presenting a case in an opening statement. This is not offered as evidence, and if counsel wishes to be captious about that we will not say anything further about it. As a matter of fact, I have ordered a certified copy of the decision rendered in the Patent Office last Saturday in favor of the defendant Wilson —

/ Mr. LYON.—I object to the statement that there was such a decision.

Robert E. Bole and Edward Double.

STRICKEN, PER ORDER OF APRIL 26, 1915.

The COURT.—Of course the Court will disregard it unless it is introduced in evidence.

Mr. BLAKESLEE.—All I wish to say is that I hope to have a certified copy of the opinion in time to offer it in this case, prior to the conclusion of the argument. I do not ask consideration of the matter formally until that arrives. But I am pointing out the general situation here, and am rather surprised at an objection to the formal statement that that decision has been rendered. So that we have here, aside from the defense of estopped, two defenses, which, as we shall contend, absolutely prevent the prevalence of the complainant's case here, namely, that there was no originality in and to this invention—which we admit was at one time an invention at the time that Bole filed his application. And we furthermore shall show that this invention, embodied in these reamers, the product of complainants, was, with full knowledge of the complainant Bole, was put forward and used by the defendant Wilson; that such procedure went on, without protest, until the time of a certain settlement of [73—14] accounts between the party Boles and the defendants.

The COURT.—What materiality has that, unless it had been used for two years?

Mr. BIAKESLEE.—The materiality is this, as we shall show by decisions, that the contention being made that the party defendant Wilson was the inventor, all of the surrounding circumstances and the actions of the parties are material to show diligence or lack of diligence on the part of the respective parties. Our contention will be that if Bole had this

stricken, per order of April 26, 1915.
invention before it was reduced to practice by Wilson, he was not diligent in any respect; and, on the contrary, we shall show that the party Wilson, immediately he produced this invention and independently produced it, put it into practice, embodied it into working structures, and sold those structures. The law requires of an inventor that he be diligent; and your Honor will be shown by the decisions that the law is not concerned so much in determining who was first man to produce a thing who diligently proceeded to give it to the public. Decision after decision will be directed to your Honor's attention which establishes the legal principle that the first man to produce a thing will not be entitled to a patent for it if he sleeps upon his rights and if during his slumbers another man who is diligent enters the field, produces the invention, reduces it to practice, and gives it to the public. The object of patent laws is to foster invention and build up the arts and industries, and, to that end, the man who is diligent in producing the invention and giving it to the public is the man to receive the reward of a monopoly for a period of seventeen years; and the further object of the law is to give this invention to the public, for its undisturbed and monopolist's use as long as possible, namely, for the period of seventeen years after patent. So that we contend it is material to show that while this complainant Bole [74—15] claims that he was the originator of this invention, he stood around and cooled his heels for a year and a half and watched the defendant Wilson put the thing on the market and give it to the public, without protest, and STRICKEN, PER ORDER OF APRIL 26, 1915.
that then, peeved and huffed because he was forced to settle an account and advisedly settled it at substan tially half its face value, rushed to a patent attorney and gave somebody an assignment on the promise to back him up in these controversies. So that that constitutes our second defense, namely, that Bole, in addition to not being the inventor, because the thing was old when he applied for patent, and not the inventor in fact because he didn't originate the invention, and because the defendant Wilson did invent the invention and was diligent about its exploitation. So that we do not attempt to avoid this charge of infringement by any divergence between the subject matter of the patent and the defendants' structures, and are willing to concede and stipulate that the defendants are making, and have since the issuance of the patent been making, and intend and threaten to continue to make, the reamers embodying this invention. And as I have suggested, we will show that they made them long before the party complainant Bole applied for the patent in suit.

Our contention is that the party Bole surreptitiously applied for and obtained this patent, and that he frauduletaly obtained it, and that the patent must be found to be invalid and of no force and effect in

law because of the defenses presented.

I wish to state, a little further, your Honor, that we shall show, by numerous decisions of the courts, that the decisions of the Patent Office on questions of this sort, questions pertinent to priority of invention, while not controlling upon the courts, are highly persuasive; and, in answer to complainant's counsel's

stricken, per order of April 26, 1915. -indication that he will object to the filing of a certified copy of the decision referred to, on the ground, as \mathcal{Y} take it, that [75—16] it may not be the ultimate decision of the Patent Office, that is immaterial, for, if the party Bole does not appeal from such decision as rendered by the primary or lower tribunal, in the Patent Office, that will be the decision of the Patent Office—the same as the dicision of this Court is the decision of this forum irrespective of/appeal. So that we will attempt to convince your Honor that the decisions of the Patent Office on these questions constituting this defense of want of priority or originality are highly persuasive upon these courts, both jurisdictions being of equal order and the jurisdictions being concurrent; and particularly in view of the fact that the Patent Office tribunals which consider these matters are especially and technically ordered and organized to handle these matters.

The COURT.—I think you are debating your case instead of presenting a statement of what your defense will be.

Mr. BLAKESLEE.—It may be I have gone beyond the proper bounds of the first presentation of the case; but I merely wished to state the difference between this tribunal and the other which has had the matter before it.

Mr. LYON.—In reply, in order that the Court may know the facts which we will present, and not—and not an argument at this time—I will state that I disagree with counsel on his law. I understand your Honor to wish an opening statement of the facts only.

The COURT. Yes, sir.

Robert E. Bole and Edward Double.

STRICKEN PER ORDER OF APRIL 26, 1915.

Mr. LYON.—I will state that we will show that long prior to the alleged use by the defendants of this device, it was invented by Robert E. Bole; and it will develop that the one question for your Honor to determine in this case is whether Bole or Wilson was the prior inventor, and who originated the invention at some time in January, 1911; and that, in rebuttal, we shall carry back, under the rule of law permitting to do so. [76—17] the invention of Robert E. Bole back of his application date, and show that he invented the device as early as 1908. Now, that will be our rebuttal testimony, except the argument. And that Wilson had full knowledge of such invention long prior thereto.

Mr. BLAKESLEE.—In order to make the issue there, preliminarily, distinctly, and clearly, we shall attempt to show the Court that the complainant's patent to Bole never was in possession of this invention before the time when the party Wilson produced it and put it into operation, and that, on the contrary, the complainant patentee Bole got all his information of the invention from the defendant party applicant Wilson.

The COURT.—Your defense is presented by amended and substituted answer?

Mr. BLAKESLEE.—That in part. Oh, there is a further amendment to the answer, permitted, which supplements the amended and substituted answer. Permission was given to amend the answer. And the defenses are the same. There is a little elaboration in the amendatory matter. And there is the counterclaim of which counsel speaks arising under the new

78 Wilson and Willard et al. vs.

STRICKEN, PER ORDER OF APRIL 26, 1915.

rules, and under which we contend the defendants have been injured and damaged to the sum of \$75,000 in and by these controversies and false representations in the field and in the trade in respect to the origin and ownership of this invention.

Pleadings referred to.) [77 18]

[Testimony of E. C. Wilson, for Defendants.]

E. C. WILSON, one of the defendants, called by and on behalf of the defendants, being first duly sworn to testify the truth, the whole truth and nothing but the truth, testified as follows:

Mr. BLAKESLEE. I understand, your Honor, that exhibits have come from the Patent Office, upon the joint request of complainant, and defendant, which will be necessary to be used in this case, and I ask, if the clerk has those, that they be made available, so that the witnesses may select from them such exhibits as they wish to use in the course of their testimony. I have not seen those. Are those the exhibits?

The CLERK.—Yes.

(Exhibits produced.)

Mr. LYON.—They ought to be checked as we go along. The clerk had better note, when he hands them out, what he hands out.

Direct Examination.

(By Mr. BLAKESLEE.)

Q. Please state your full name, age, residence and occupation.

A. Elihu C. Wilson. Forty-four years old. 734 Berendo Street, Los Angeles, California. President of the Wilson & Willard Manufacturing Company.

- Q. What is the business of that concern, Mr. Wilson?
- A. We manufacture all our tools and machinery, pumping machinery—our own patents, chiefly.
- Q. How long have you been engaged in that general line of business?
- A. I have been associated with iron works since the year 1897, whose business it has been to manufacture oil well tools [78—19] and machinery.
- Q. Prior to your connection with that business, had you had any training, technical or otherwise, for such manufacturing work? And, if so, what?
 - A. No, sir; not prior to 1907—1897, I should say.
- Q. Had you had, or not, an academic training before going into the manufacturing business?
 - A. Yes, sir; I had had a fairly good education.
 - Q. Briefly what?
- A. Public school education, and training in the university.
 - Q. What university? A. Stanford University.
 - Q. Where is your present business located?
- A. On 15th Street near Santa Fe Avenue, in this city.
 - Q. How long has it been located there?
 - A. For about six years.
- Q. Can you mention any other kinds of oil well apparatus than those you have stated which you were manufacturing?
- A. In addition to this under-reamer we were manufacturing the Wilson Casing Spear, the Wilson Casing Elevators—both of which are my inventions—

and we are manufacturing a circulating-head invented by Mr. Willard, and manufacturing a pitman invented by my brother, and manufacturing a double-acting deep well pump, which is also an invention of my brother's, W. W.

Mr. LYON.—I move to strike all that portion of the answer, and each part and parcel thereof, from the record and exclude it from consideration, which pretends to say that any one of these devices was invented by some particular person, on the ground it is incompetent, not the best evidence, and hearsay.

The COURT.—(After argument.) I will sustain the motion, so far as it goes to who invented these things, anyway.

- Q. (By Mr. BLAKESLEE.) What is your connection with this [79—20] business of the Wilson Manufacturing Company, officially or otherwise?
 - A. I am president and manager of the institution.
- Q. And who controls the business of that company as to ownership?

Mr. LYON.—Object to that as calling for the conclusion of the witness; incompetent.

Mr. BLAKESLEE.—I wish to show the relations that have existed in connection with the ownership of this company, and the dealings between this company and the complainant Bole.

The COURT.—Objection overruled.

A. I do.

Q. (By Mr. BLAKESLEE.) As to the underreamer business of the defendant company, is that a business, and has it been from the beginning of the

business, that that company has principally, or what has been the situation in that respect, and your relation to that business?

Mr. LYON.—We object to that as leading, and as irrelevant, immaterial and incompetent, and calling for the conclusion of the witness and not for a statement of the facts.

Mr. BLAKESLEE.—We wish to show that this has been the business of this defendant, to lay the proper foundation that the party Bole, when he was associated with this defendant, had no interest in and to this reamer business pertinent to the invention.

The COURT.—Objection sustained.

Q. (By Mr. BLAKESLEE.) Prior to manufacturing under-reamers at the present place of business of the defendant company, had such under-reamers been manufactured by you or on your behalf at any other place or by any other concern?

Mr. LYON.—That is objected to as leading, and as incompetent, calling for the conclusion of the witness, and as ambiguous and indefinite—particularly as to the use of the term "such under-reamers." [80—21]

Mr. BLAKESLEE.—We wish to show the genesis of the invention; and the reamer has not been defined, excepting in general terms, so far.

The COURT.—I don't see any materiality in it; but I will let this go in at present. Overrule the objection.

A. The Wilson & Willard Manufacturing Company's plant had occupied another building on Cen-

tral Avenue near 9th Street, and at that place we manufactured Wilson under-reamers.

Q. (By Mr. BLAKESLEE.) And prior to that time? A. Prior to that time.

Mr. LYON.—Same objection.

- A. (Continuing.) They had been manufactured to a very considerable extent in the plant of the Bakersfield Iron Works, in Bakersfield, Kern County, California.
- Q. (By Mr. BLAKESLEE.) Who was in charge of those iron works?
 - A. I was in charge of that plant at that time.
- Q. How long have under-reamers been manufactured by you or on your behalf with some device or means for holding the lower end of the spring surrounding the movable rod in the body of the reamer?

Mr. LYON.—Object to that as leading, irrelevant, immaterial and incompetent for any purpose in this case at the present time; no foundation laid.

The COURT.—I will overrule the objection.

- A. The first reamer I had manufactured was made by the Baker Iron Works of this city, in the early part of the year 1904.
- Q. (By Mr. BLAKESLEE.) Can you describe briefly the several forms of means of that sort which have been employed in Wilson under-reamers manufactured by you or on your behalf? A. I can.
 - Q. Please do so. [81—22]

Mr. LYON.—Objected to as irrelevant, immaterial and incompetent, and not the best evidence.

The COURT.—Objection overruled.

Q. (By Mr. BLAKESLEE.) (Continuing.) And if you have before you or can produce anything to illustrate such construction of such means, please do so.

Mr. LYON.—Same objection.

A. The first reamer I had manufactured differed from the one in this suit in that the tee-bar on which the cutters are suspended do not have a slot. It provided a round collar with a hole in it which went down over this stem or tee and formed a set for the spring. When the tee-bar with the spring on it and the cutters attached thereto were admitted into the mouth of the reamer they were all held in place by means of two pins—not threaded pins, but plain tapered pins, called Dowell pins, which were drilled in two holes in the side of the body, and which pins came into contact with the collar in such a way as to hold it all in place. That was the first type of reamer I had made. I later abandoned the plain taper pins, and instead of them I used two screws, threaded pins or plugs which screwed into the sides of the reamer body and set in the holes drilled in this collar, and thereby the springs, cutters and tee were held in place in the reamer body. I changed to another style, abandoning the use of the collar and the screw plugs, using a solid tee, a tee very similar to this, only not so heavy, in the patent, and employed a double key, tapering key, one having a shoulder at the lower edge, and which dropped down into the bore of the reamer body when in place, and the other tapered key was inserted from the opposite side of

the reamer body and was held in place by means of a block or screw which was set into the reamer body and which held the keys, or upper half of the key, in place. In addition to those designs, I designed the single-piece key which took the place of the double [82—23] key, and I built a heavier tee, and that is the one I have been manufacturing now for the last three years or more.

Q. (By the COURT.) Is that the one in controversy?

A. That is the one in controversy.

The COURT.—I understood the witness to say that he invented this thing.

Mr. LYON.—No; he says he designed it.

The COURT.—Designed it.

Q. (By Mr. BLAKESLEE.) Can you at this time refer to anything before us which discloses the single-piece key to which you have just referred?

A. Yes, sir; I can. The under-reamer which we have here in the room and which we assembled and disassembled is the type I have always used in the single-piece key type of Wilson Under-reamer.

Mr. BLAKESLEE.—Just note that the witness refers to the specimen reamer in the room which has been disassembled and reassembled for the explanation of the invention by counsel before the Court. And we offer the same in evidence as "Defendant's Exhibit Wilson Single-piece Key Reamer."

Q. At the present time, are you manufacturing Wilson Under-reamers containing any other sort of means for holding the lower end of the spring surrounding the spring-actuated rod?

Mr. LYON.—We object to that as irrelevant and immaterial.

Mr. BLAKESLEE.—We wish to show the practice with regard to this invention, and the reamers, in connection with the development of these reamers and the business, and its importance, and so forth?

A. Yes, sir; we do. We are at present manufacturing a considerable quantity of under-reamers of the type known as the block and screw type, the one which uses the collar and key. We of course are manufacturing the single-piece key type. [83—24]

- Q. (By Mr. BLAKESLEE.) How long did you manufacture and sell Wilson under-reamers containing the two-piece key device for holding the lower end of the spring in the hollow body?
 - A. Possibly a year or year and a half.
 - Q. (By the COURT.) Has that been patented?
- A. No application was made for patent on that double key.
- Q. (By Mr. BLAKESLEE.) Can you identify the period of time when this last-mentioned manufacture occurred, approximately?

A. It was sometime during the year of 1907 or 1908, I believe, that the two-piece type reamer was made. Possibly as late as 1909.

Q. Can you produce at the present time any showing of such two-piece key device for holding the lower end of the spring in the Wilson Reamer as manufactured by you as last testified? A. I can.

Mr. BLAKESLEE.—Note on the record witness produces two blue-prints; and the same are offered

in evidence, respectively, as Wilson Exhibit Photo "A" of Wilson Reamer Two-piece Key Device, and Wilson Exhibit Photo "B" of Two-piece Key Device.

Mr. LYON.—Objected to as incompetent; no foundation laid.

Mr. BLAKESLEE.—As pointed out, we wish to show the genesis of this invention and that this party Wilson was the logical producer of the invention in issue.

Q. Will you please explain, by reference to any wording or lettering or markings upon these blue-prints, what check the showing of the same is, with particular reference to the two-piece key you have spoken of?

Mr. LYON.—I object to that until the witness answers the question as to whether, of his own knowledge, that is a correct representation of some one of those prints. I don't want the question to be raised hereafter that this witness has not said these truly represent the reamer. I object to the offer, on the [84—25] ground that there is no foundation laid; incompetent. There has been no foundation laid yet. We have been permitting counsel to assume that he will lay the foundation.

Mr. BLAKESLEE.—He has testified that that is made from the negative.

A. They are photographic reproductions of the under-reamer just as we manufactured them.

Mr. LYON.—And when were they taken?
The COURT.—He has stated they were taken

when they were manufactured in Bakersfield.

The WITNESS.—Yes, sir. I think in, possibly, 1907.

Mr. BLAKESLEE.—He has already testified to that.

(Previous question read to the witness by the stenographer.)

A. In one of these photographs the two-piece key is shown partly inserted in the body. One of my machinists is holding one piece of the key in one hand and the other piece in the opposite hand. They are marked here in ink on this photograph. One is marked "Lower piece of key," and the notation in ink is shown indicating the shoulder at the lower edge of this key. The other part of the key is marked, "Upper part of key," with an arrow indicating, in each instance.

(Adjourned until two o'clock P. M.) [85—26]

Tuesday, March 23, 1915, 2 o'clock P. M. E. C. WILSON (Recalled).

Direct Examination (Resumed).

(By Mr. BLAKESLEE.)

Q. Have you received letters patent for inventions upon which you made application for letters patent?

Mr. LYON.—Objected to as leading, irrelevant, immaterial and needlessly incumbering the record.

The COURT.—It seems to me the patents would be the best evidence.

Mr. BLAKESLEE.—We wish to show that he has received letters patent and in that respect he has been an inventor, and so forth.

The COURT.—That he has received patents for certain things?

Mr. BLAKESLEE.—Yes, sir; issued to him. It is immaterial what they are, to this issue.

The COURT.—It would be a novel thing if that is pertinent testimony in this case.

Mr. BLAKESLEE.—Simply to establish the surrounding circumstances that he is and has been an inventor and has received letters patent for his inventions. It is to show the mental attitude and the course of events with respect to inventions. This is a controversy in one phase of it as to who invented this device.

The COURT.—I will sustain the objection.

Q. (By Mr. BLAKESLEE.) When was it that an under-reamer was first manufactured, or, rather, commenced to be manufactured by you or on your behalf embodying the single-piece key such as that shown in "Defendant's Exhibit Wilson Single-piece Key Reamer"?

Mr. LYON.—That question in that form is objected to as [86—27] leading and as incompetent, calling for a conclusion of the witness and not the proper method of proof.

The COURT.—I must confess I do not understand the question.

Mr. BLAKESLEE.—Your Honor, this question, it seems to me, directly concerns the issue. One of our defenses is that this invention had been used and that these reamers had been used—

The COURT.—It may be your question is rele-

vant, but I don't understand it.

Mr. BLAKESLEE.—I am not asking with reference to any invention. That might be a conclusion.

Mr. LYON.—It is the device in suit that he is referring to.

Mr. BLAKESLEE.—This reamer over here that we concede we are making and which we contend was made nearly two years prior to the application for the patent in suit.

The COURT.—Answer the question.

A. The first order was made up on February 3, 1911.

Q. (By Mr. BLAKESLEE.) Please state if you know by whom such order was made up.

A. It was dictated by myself.

Q. Where?

A. In the office of the Wilson & Willard Manufacturing Company in this city.

Q. What was next done with that order?

A. The order was typewritten by the stenographer in the usual form and sent to the foreman for execution.

The COURT.—Mr. Blakeslee, I beg your pardon. What became of those blue-prints? Have we disposed of that matter in the testimony this morning?

Mr. BLAKESLEE.—I think so. They were offered simply to show the form and construction of those two-piece keys.

The COURT.—Are they marked as an exhibit?

Mr. BLAKESLEE.—They are offered but not yet marked. [87-28]

The COURT.—I do not understand that they had been admitted. What is the purpose of offering those in evidence?

Mr. BLAKESLEE.—To show the genesis of this invention. That is a question material to this issue where the proofs concern the production of a certain thing and the surrounding circumstances are material to show the production. Here is a controversy between two parties—

The COURT.—You object to those being admitted?

Mr. LYON.—We do not object to those and concede them to be true copies.

The COURT.—You can argue that when it comes to the argument. They will be admitted.

Mr. BLAKESLEE.—And the reamer exhibit has also been admitted?

The COURT.—That mechanical construction is admitted. Is that understood, gentlemen?

Mr. Lyon.—The reamer itself, yes.

The COURT.—The whole machine—the key.

- Q. (By Mr. BLAKESLEE.) Who was the foreman of the shop at that time? A. Mr. Knapp.
 - Q. State his full name. A. William G. Knapp.
 - Q. Is he employed by you at the present time?
 - A. No, sir.
- Q. When did he sever his connection with your institution? A. About two or three months ago.
- Q. Can you produce at this time the order which you made out as you say, in 1911—February 3, 1911—for the making of this first Wilson reamer with

this single-piece key? If so, please do so.

A. I can. This is the original transcription from my dictation [88—29] showing the order for the first reamer of this single-piece key type.

Mr. LYON.—We object to the answer, especially all that portion following the words "Yes, sir" as not responsive to the question, incompetent, not the best evidence, the paper speaking for itself, and we move to strike it out from the record and exclude it from consideration.

The COURT.—The motion will be granted.

Q. (By Mr. BLAKESLEE.) Please read to us what this order sets forth.

Mr. LYON.—We object to that as not the best evidence.

The COURT.—The order, of course, will show for itself, but I don't see why he should not read it. Read it into the record.

A. This is made on a regular form of order which we use in our shop. Dated February 3, 1911. Charge to reamer account. Order number 6904. E. C. Wilson, Dictator. Change 8-inch reamer 120 as follows: Anneal same and remill to standard size 8-inch cutter. Bore out a hole for spring to 4-inch diameter. Make special 7/16 by 3/4 by 18 spring. Put in bottom bolt. Equip with extra heavy slotted tee of new type, same to be made of nickel steel. Those dimensions are put in in pencil—the 4-inch and the dimensions pertaining to the spring.

Q. (By Mr. BLAKESLEE.) At the time you made out this order what was the system in practice

at your shop with relation to making out and executing such orders?

A. The order was dictated—or sometimes written in pencil—on a blank form of an order, and turned over to the stenographer who made generally five copies; one copy of the order was a register or index order which was filed away in numerical order with reference to the shop order number. Two of the sheets were used for our sales sheets and cost sheets, and the other two were sent to the shop, one of which went to [89—30] foreman for execution and the other generally to the shipping department.

Q. To what extent and in what manner at that time, namely, the time of making out this order, did you keep in touch with the making out of and execution of such orders in the shop and office?

A. I was in close touch with the business as it was started through the shop and observed it as it was being made in the shop, and oftentimes I gave the shipping instructions to the shipping clerk.

Q. As to the manufacture of these under-reamers and the orders for manufacturing the same, was or was there not anybody in that company or connected with it who was particularly interested, and, if so, who?

Mr. LYON.—Objected to as leading and calling for a conclusion of the witness and not for a statement of facts.

The COURT.—The objection is sustained.

Q. (By Mr. BLAKESLEE.) As to this underreamer business at the time you have stated, in what

name was the account pertinent to the manufacture and sale of under-reamers kept?

Mr. LYON.—Objected to as assuming a fact not appearing from the record, and as irrelevant and immaterial.

The COURT.—The objection is overruled.

A. The under-reamers were manufactured by the Wilson & Willard Manufacturing Company and charged to a special account known as the "Reamer Account" on the books. That reamer account was one for which I was responsible, as it was the one in which I was charged for the manufacture of the under-reamers, and that account was credited when the under-reamers were sold.

- Q. (By Mr. BLAKESLEE.) Where did the profits or proceeds from such reamers go?
 - A. To myself. [90—31]
- Q. Please state, if you know, what these other slips are, connected with this Order No. 6904, in your hands.
- Mr. LYON.—Objected to as incompetent, no foundation laid, not shown that the witness has any personal knowledge of any of those slips.

The COURT.—The objection is overruled.

- A. One of these orders is—
- Q. (By Mr. BLAKESLEE.) Please take them up seriatim, the one next to that, and so get them in sequence.
- A. Order No. 7056, dated February 18, was made out from the reamer account and covers "Forge and machine one special 8-inch slotted tee of nickel steel;

coil 1 special spring for same," This order was dictated by Mr. Knapp. It has his initial "K" indicating that the order was made up by him. This was a subdivision of the original order.

Mr. LYON.—May I ask a question to save time? Have you any personal knowledge of Mr. Knapp making up that particular order?

A. I saw the order as it was in the shop, yes; I know the order was made up.

Q. Did you see him make the order up?

A. I did not see him dictate it.

Mr. LYON.—I move to strike that from the record as hearsay and ask the Court to instruct the witness to confine his testimony to that which he knows to be a fact.

The COURT.—You ought to prove those facts by the man who made up the matter instead of secondary evidence.

Mr. BLAKESLEE.—We shall prove that by the other witness.

A. The other sheet shows a drawing of this special 8-inch slotted tee, which drawing I made up myself in pencil, and was the original sketch or drawing to govern the foreman in making the 8-inch tee for this reamer 120.

Q. What, if you know, was done with this last-mentioned slip [91—32] showing this sketch you say you made after you completed the sketch?

A. It was part of the instructions I gave to Mr. Knapp to guide him in making up this reamer.

Q. What was done with this particular paper with

(Testimony of E. C. Wilson.) the sketch at that time?

- A. It was turned over to Mr. Knapp.
- Q. Is that the same Mr. Knapp you have spoken of before as foreman of the shop at that time?
 - A. Yes, sir.
- Q. And in giving Mr. Knapp these instructions including the delivery to him of these slips you have referred to as having been so delivered to him, were or were not any further instructions of any kind given to Mr. Knapp with respect to the making over of this reamer 120?

 A. There were.
 - Q. What was the nature of the same?
- A. I gave him instructions in regard to the type of spring to use and also in regard to the one-piece key which was to be used in this reamer.
- Q. How did you give him instructions with respect to this one-piece key?
- A. It is my recollection that the sketch was made up on a piece of brown paper in the same manner that this fee is made up.
- Q. Were any further instructions along this line given to Mr. Knapp to your knowledge?
- A. Yes, sir. I remember on two or three different occasions explaining to Mr. Knapp how to make the keys.
- Q. And about what time, as near as you can place it?
- A. That was probably about February 3, or very soon thereafter, of 1911.
- Q. To your knowledge, what next occurred at your shop in [92—33] connection with this order 6904

(Testimony of E. C. Wilson.) concerning the making up of reamer 120?

A. The foreman put in execution the order for construction that I gave him in regard to the making of the reamer over.

Mr. LYON.—We move to strike the answer from the record on the ground that it is a conclusion and not a statement of fact.

Mr. BLAKESLEE.—We agree that it be stricken out.

A. The reamer was changed over as per instructions.

Q. Please recite what was done in those particulars to your knowledge.

A. An under-reamer we had in stock of the oldstyle, two-piece key type, the number of which reamer was 120, was changed over to the single-piece key type as per these instructions which I have just read.

Q. And what occurred with respect to this reamer in so changing it over?

A. The reamer was sold. It was sent out and was used.

Q. My question was directed to what was done pursuant to the order you say you gave in connection with this reamer, and by that I mean what physical acts were performed or effects produced.

A. I did not understand your question. In order to admit of a larger size tee and spring, we had to anneal the tempered end of the body or mouth of the body in order to bore it out to a larger size. We made a larger tee, made a larger spring, and made a 1-piece key. We had to drill out the lower end of

that under-reamer body and fit a safety bolt to it which the reamer did not have in the first place, I believe. In making the key we had considerable difficulty in removing it with a lever that I had devised by changing over a lever which I had in stock for use in assembling the block-and-screw type of underreamer. We had had considerable trouble, as I say, in removing this key, and it was one day discovered by [93—34] a machinist that we have by the name of Houriet that by merely driving a wedge or the pointed end of a file underneath one end of this key he could pry it up to such a position that the operator could drive it out from the opposite side. The idea I had in mind first in removing this key, was to have a notch at the lower edge of one end of the key, and by a certain shaped lever it could be pressed beneath the key, and pry it upwardly and pry the key outwardly. But that did not seem to be so successful, and the means discovered by Mr. Houriet was the successful means and the one we have always used since. It was a little key that we drove in at one end and pried it up.

Q. (By the COURT.) At one side?

A. Yes; and then it could be driven out from the other side. I had always known in thinking this key over that there would be probably considerable trouble to remove that key. I was afraid that it would be so serious that it would prevent its being adopted, and a trial of the lever means proved my suspicions to be somewhat correct. But Mr. Houriet's method overcame the trouble.

Q. (By Mr. BLAKESLEE.) Can you mention the names of any other persons who had anything to do with the making over of reamer 120 and its construction so that it would embody the single-piece key?

A. You mean the men who actually worked on the reamer?

Q. Yes.

Mr. LYON.—Of your own knowledge.

A. The key was forged by Mr. Rydgren and his helper Mr. Bird. Some of the fitting work was done by a man named Wills. I believe Mr. Houriet himself also did some work on that key.

Q. (By Mr. BLAKESLEE.) Are any of these men in your employ at the present time? And, if so, which? A. Mr. Houriet is still in our employ.

Q. After the last step was taken on this reamer 120, in making it over to include the 1-piece key, what became of such [93a—35] made-over reamer?

A. It was for some weeks in our shop, and a sale was not made of it till, I believe, in June, 1911.

Q. To whom was it then sold?

A. It was sold to Norbeck & Nicholson Company, South Dakota.

Q. And was it delivered to them?

A. It was shipped to them; yes, sir.

Q. When? A. It was in June, 1911.

Q. Can you produce any record or document which in any way will identify the date of such shipment to this vendee?

A. I believe the copy of the original shop order is

(Testimony of E. C. Wilson.) among the exhibits here.

Mr. LYON.—Have you the date in mind when that was shipped? I do not controvert it. Mr. Wilson don't know anything about it, either, according to his own recollection. I am willing to admit that it was shipped at whatever date you say it was shipped. We have no question but what it was shipped to these people.

A. This is the order on which that sale to the Norbeck & Nicholson Company was made. It was shipped on June 17, 1911.

Mr. BLAKESLEE.—I will ask counsel if he is prepared to stipulate that a reamer of this construction and embodying all of the claims of the patent in suit was completed at the shop of the Wilson & Willard Manufacturing Company, the defendant, and thereafter put into successful operation not later than the 1st of July, 1911.

Mr. LYON.—I will not make any stipulation in view of the refusal of counsel for Wilson to make any in this case.

Mr. BLAKESLEE.—You said you wished to save time.

Mr. LYON.—This witness doesn't know those facts of his own knowledge.

Mr. BLAKESLEE.—It was so stipulated before, I believe, in the [94—36] other case.

Q. Please state, to the best of your knowledge, when the first work on this reamer 120 was completed so that it was in condition to be sold.

Mr. LYON.—I object to the question as incompe-

tent, the witness not having qualified to answer the question. I am not making the objection captiously, because it is the very crux of the case, and I want to know whether the witness knows of his own knowledge what he is talking about.

Mr. BLAKESLEE.—That is all we ask for. He testified to the production of it and the shipment of it.

The COURT.—I will overrule the objection.

- A. The order was completed in April, 1911, to the best of my knowledge, although the exact dates are on these sheets here.
- Q. (By Mr. BLAKESLEE.) Can you produce any further paper or document which to your knowledge pertains to the work upon this reamer 120 about which you have testified?
- A. Yes, sir; there was a drawing made from this little sketch which is a regular working drawing for this slotted tee.
 - Q. When did you first see this drawing?
- A. At the time the work was being done in the shop.
 - Q. Can you specify as to the date?
- A. It was shortly after the original order was made up as part of the regular course of work in completing the order. This drawing also shows an outline of the key—
- Mr. LYON.—We object to the statement of the witness what the drawing shows. The drawing speaks for itself.
 - Q. (By the COURT.) Did you make that draw-

ing? A. I did not.

The COURT.—I don't think the witness is competent to explain it, unless he made it.

Mr. BLAKESLEE.—My question was when he first saw it, and [95—37] I agree to the objection. I am simply developing the knowledge of the witness of this drawing.

Q. Do you know who made this drawing, and, if so, who?

The COURT.—What materiality is that, whether he knows who made it?

Mr. BLAKESLEE.—He will be corroborated as to that. We wish to establish this by the testimony of corroborating witnesses as to his connection with this work, to fix the date which, as counsel says, is important, when this reamer was made over and completed.

Mr. LYON.—I said when it was completed, and not when they were doing the work.

The COURT.—Overruled.

- A. The drawing of the other tee and spring was made by our draughtsman at that time, whose name was Bandell. The drawing of the key was made by Mr. Knapp.
- Q. (By Mr. BLAKESLEE.) You have referred to a drawing of a key. Which is that on that sketch?
 - A. A drawing at the lower left-hand corner of this.
- Q. And what is that key so portrayed there, to your knowledge?
- A. It is a drawing of the single-piece key used in completion of this 8-inch reamer 120.

The COURT.—As I understand, this is a drawing to the one that was shipped.

Mr. BLAKESLEE.—Yes, sir. The witness has testified that that sketch on brown paper was made to conform with the sketch before your Honor, the yellow paper which was made by the witness.

Mr. BLAKESLEE.—We offer in evidence the group of slips, and shop orders, sketches, etc., just discussed by the witness, as "Defendant's Exhibit February, 1911, Wilson & Willard Manufacturing Company Shop Record Slips," and ask that the same be so received and marked.

Mr. LYON.—Objected to as incompetent, no foundation laid, not [96—38] identified, and that this witness has not personal knowledge of all those slips, and, of course, this objection does not go to those that he has any knowledge of.

The COURT.—Isn't that right?

Mr. BLAKESLEE.—That is perfectly satisfactory. They are grouped together because they pertain to the certain matter. The objection, of course, we agree to, as attaches to anything the witness has not identified.

The COURT.—You can hold the exhibit in reserve until it is fully identified.

Mr. BLAKESLEE.—And reoffer it at that time.

Q. Where have these several slips that I have just referred to and you have discussed, been since you first saw them?

Mr. LYON.—Objected to as irrelevant and immaterial.

Mr. BLAKESLEE.—I want to show that they are part of the records of somebody.

- A. They have been in the regular files of shop orders and time-cards in the shop.
- Q. (By the COURT.) Who made these red writings on here, or dates?

Mr. LYON.—I don't like to object to the Court's question, but I don't think this man knows.

- A. That is Mr. Knapp's writing—the writing in red pencil.
- Q. (By Mr. LYON.) You didn't see it put on there and know anything about it at the time, did you?
- A. I don't know whether I saw it put on there or not.

Mr. LYON.—I move to strike the answer from the record and exclude it from consideration.

Mr. BLAKESLEE.—He says he knows the writing.

The COURT.—The objection is overruled.

- Q. (By Mr. BLAKESLEE.) Please state if you know from whom the men who worked on this reamer 120 in making it over, as you have [97—39] testified, received their pay.
- A. From the Wilson & Willard Manufacturing Company, of which I am president.
- Q. And what was your office in connection with that company at that time?
 - A. President at that time.
- Q. In connection with this single-piece key device of the Wilson under-reamer, what did you first have

(Testimony of E. C. Wilson.) to do with the same in any respect?

- A. You mean that particular reamer 120?
- Q. Yes; that reamer, or with the single-piece key device such as is incorporated in that reamer.

A. The idea of the single-piece key had occurred to me on many occasions before this order was made up, namely, before February 3, 1911. As early as 1906 or seven I had devised this 2-piece key type, and in designing that type of reamer different ideas of single-piece keys had occurred to me, but I concluded at that time that the double-piece key was the better type. I think it was in January—on January 26, 1911—we received an order from the Pacific Iron Works of McKittrick, for an old-style slotted tee for 121/2-inch Wilson under-reamer to be shipped up by express. The order was filed on that day and I was surprised to find that there was a reamer of that type still in use. We had changed over a great many of those reamers to the block-and-screw type. I had abandoned the use of the slotted-tee type before on account of the weakness of the tee. It broke through the slot. I had depended on a draughtsman whom I had employed when that reamer was first constructed to so proportion the tee and lay it out to working size of the drawings as to give that tee all the strength possible. The breakage of these tees caused me to abandon the use of them and to go back to what we termed the "block-and-screw" type. So that this order received on January 26, [98-40] 1911, again brought to my mind that possibly there was merit in that tee, and for the first time it oc-

curred to me that it was barely possible that the draughtsman had made an error in his dimensions and had not made the tee as strong as it could be made. I went over to a draughting board and myself laid out one of the tees of the slotted type, increasing its size and making it the size that I discovered when I commenced to work on it myself that it could be made. I was surprised to find that it was fully twice as strong as those we had made when that type of reamer was being made by our plant and by the Bakersfield Iron Works. I then made up my mind that I would go back to the slotted-tee type, using the larger proportions of tees. With that idea thoroughly settled, I checked up by comparing my figures with those of my brother's. We went over them very carefully at that time, January 26, 1911, and I then made up my mind that it was possible to make a single-piece key which might overcome a few of the minor troubles we had had with the doublekey type. The double-key type was a success with the exception of the tee and possible occasional trouble had by the plug which held half of the doublepiece key in place, when it would rust and stick and sometimes cause trouble to remove. But that was really a minor trouble with that key. The ideas that I had had and that had occurred to me back in 1906 or seven then occurred to me, and I pondered over that idea in keys three or four days. I made sketches of them, and thought over them and studied over them at home, and I could not determine in my own mind which was the better form of those keys to try

out first in this new type of reamer. And finally I concluded one day to call some of the boys together and get their opinion of which would be the better type of key to adopt in this 8-inch reamer that we were changing over. And some time about February 1, or 2 or 3—somewhere right in there—one afternoon I called some of our boys together and [99— 41] explained to them that I was going back to the slotted-tee type; that I was satisfied it was the best, as I had discovered that I could increase the strength of the tee so that that trouble would be settled and overcome; but that I was not sure which style of the key I would use. And I then produced some little sketches which I then had in my pocket and which I had been thinking over and said, "Here are the different ideas I have," one of which would have to be held in with a plug and another one probably with two plugs, and one dispensing with the use of the plug at all; but that the key, while I could see that it was stronger and probably very convenient to put in place, I was uncertain as to the best method of removing it from the reamer when it was in place. The tension of that spring is very great on large reamers and it is a pretty difficult matter to get the key out. And in our conversation I said, "Here is the best key. I can see that. It will stay in the reamer without the use of any plug at all, but we will have trouble to remove it." And at that juncture Mr. Bole, who was in that conference—there was Mr. Knapp, I believe, Mr. Willcox, possibly my brother W. W., and Mr. A. G. Willard and Mr. Bole. We

were all in conference over this key proposition—Mr. Bole suggested to pry it out. I said, "Very well. We will admit that it can be pried out, but won't it give so much trouble in doing so that it will probably condemn it and the drillers won't use it?" He says, "No; I can devise a tool which will pry it out." I said, "I can devise a tool that will pry it out, but I think it will give us a good deal of trouble." After further discussion the boys agreed with me that that was the better style of key, and it was well worth trying, and with that point settled we proceeded to make up a single-piece key as I desired. That was the genesis of that key.

- Q. In what manner or by what means did you put before these several persons at the date mentioned in February, 1911, this single-piece key and the various forms of the same that you have told us about? [100—42]
- A. I had some little sketches on—I don't know whether it was these shop orders, but, at any rate, it was some papers that I had in the shop and which I had made while I was thinking it up, and which I had been carrying around for several days. And that is the way I submitted these ideas to these men for their consideration.
 - Q. Do you know where those sketches are now?
 - A. No, sir; I do not.
 - Q. When did you last see them?
- A. I don't remember. I don't think I preserved them at all. The key was made up, probably, from

the one I showed the boys at the time, one of these original sketches.

- Q. Have you at any time since then attempted to reproduce the sketches which you have testified you showed at that time to these several parties?
- Mr. LYON.—We object to that as leading and irrelevant and immaterial. Such reproductions would be no better than sketches that he could make at the present time.

The COURT.—I agree with you. I don't think that is material evidence. (Discussion). I will overrule the objection.

Mr. LYON.—This sketch is the same as if he made some now for use in the Patent Office.

The COURT.—I don't see any difference between a sketch made now and one made one year ago.

- A. If it will satisfy them any better I can make those sketches now without referring to the documents which I made a year ago.
- Q. (By Mr. BLAKESLEE.) It will save considerable time as well.

The COURT.—The objection is overruled.

- A. I have.
- Q. (By Mr. BLAKESLEE.) Can you at this time produce any such attempted reproductions? [101—43]
 - A. That goes back to these? This is it right here.
 - Q. Please state when you made this reproduction.
- A. While the testimony in the interference case was being taken.
 - Q. What interference do you refer to?

A. The case of Wilson & Willard vs. Robert E. Bole, I believe, and Edward Double or the Union Tool Company. I don't know how it is entitled.

Q. Where was that interference pending?

Mr. LYON.—Objected to as irrelevant and immaterial.

The COURT.—The question is, what this is; what it was used for and when.

Q. (By Mr. BLAKESLEE.) Will you please tell us what you intended to portray by these reproduction sketches at the time you made the same and what the purpose was for making the same?

A. It was to illustrate the different styles of keys, or some of them, at least, which I had submitted to the gentlemen mentioned at that conference or conversation about February 1, 2 or 3, of 1911.

Q. Referring to the several showings of this sketch, will you please tell the Court what they represent,

A. This Fig. 1 represented a 1-piece key which required two plugs to hold it in place. One of the plugs remained in the reamer body permanently, while the other had to be removed in order to remove the key. This key was tapered at one end only. The other, Fig. 2, was designed very much like Fig. 1, with the exception that it had downwardly projecting shoulder at the lower edge of the key, just as appeared on one-half of the double-piece key which I had used several years before. By driving that key underneath the spring and driving it into place, the downward projection at the lower edge would

drop into the bore of the reamer body and would prevent the key from returning that way. To prevent the key from going on through, a plug was used which [102-44] screwed into the reamer body and partly covered up this slot in which the key fitted. This kept the key from moving either way. To remove that key the plug in the reamer body was removed and the key could then be driven completely through the reamer and removed. Another key shown by Fig. 3 was the key very much like the one in this exhibit of under-reamer here in the room. I believe that key was tapered at one end only. I think that was the idea I had when I first presented these drawings. It had a downwardly projecting shoulder which dropped into the reamer bore and which was held in place by the tension of the spring.

Q. I notice that this reproduction sketch has variour wordings on it. What relation is there between such wording and the language you have used in describing what this sketch shows or what these sketches show?

The COURT.—I don't think that wording on there is material. He has testified what the drawing is for.

A. The wording as noted on this sketch was made by myself at the time this interference testimony was taken, and it simply explains the different pieces of the reamer body and key and the different shoulders, angles and plugs as I have referred to them here at present.

Q. (By Mr. BLAKESLEE.) What relation is

there between any of the keys shown in this sketch and the key which was put in the reamer No. 120 made over on your order of February 3, 1911?

Mr. LYON.—That is objected to as leading and suggestive, incompetent, calling for the mere conclusion of the witness and not the best evidence. The exhibit speaks for itself.

The COURT.—It seems to me that asking a witness what the relation is is calling for the opinion of the witness, or conclusion, as it is called. Describing two things would certainly serve the purpose. The Court can determine what the relation is.

Mr. BLAKESLEE.—The question is withdrawn. [103—45]

Q. Please compare the keys shown in this sketch or any of them with the key which entered into the construction of reamer 120 made over upon your order of February 3, 1911.

Mr. LYON.—Objected to as irrelevant, immaterial, incompetent, and needlessly encumbering the record. The other key has a drawing of it already in the record.

Mr. BLAKESLEE.—We want to couple up with this first manufacture the mental procedure of this witness in connection with the invention.

The COURT.—It seems to me all these drawings are very simple. I do not see that it requires any expert testimony in describing the drawings. (Discussion.) I am not going to permit the witness to argue his case. I will let him proceed. If that is the purpose of the question, I will not permit it. I

will let him answer it subject to a motion to strike out.

A. The key Fig. 3 as shown in this sketch is, with the exception of the upper right-hand corner, the type of key which was made and used in reamer 120, and with the exception, too, of two little notches, one at each of the lower edges at the extreme ends.

Mr. LYON.—We renew the objection and move to strike out the answer from the record on the ground stated.

The COURT.—I will overrule the motion. Proceed, Mr. Blakeslee.

Mr. BLAKESLEE.—Let the record show that the group of shop slips, sketches, etc., to which the witness has previously referred, is at present marked for identification "Wilson's Exhibit February, 1911, Wilson & Willard Manufacturing Company Shop Record Slips," and, likewise, that the sketch matter and wording, etc., upon brown paper to which the witness subsequently referred is marked for identification "Wilson Exhibit Wilson Reamer Key and Tee Sketch of 1911."

The COURT.—Hadn't you better mark them for identification with some number? I think they had better be marked for identification only. They are not received in evidence. [104—46]

Q. (By Mr. BLAKESLEE.) Are you at the present time able to produce any document or thing which tends to fix the time at which you did this work in your shop, as you have testified, in the latter part of January, 1911, preparatory to giving the

order for making over reamer 120? I am referring particularly to the work you say you did at the draughting board.

Mr. LYON.—I object to that question as it calls for a conclusion as to whether it tends to fix.

The COURT.—I think that objection is well taken. If he has got any other thing, let him produce it.

- Q. (By Mr. BLAKESLEE.) Can you at this time in any way identify and fix the date at which you say you did work at the draughting board, etc., in the latter part of January, 1911, prior to giving the order for making over reamer 120?
 - A. Yes, sir; I can.
 - Q. Please do so.

A. On the day I received the order from Mr. Williams, January 26, 1911, I wrote a letter-

Mr. LYON.—I object on the ground that the answer is not responsive, not the best evidence and incompetent. He is going ahead to state that he wrote a letter at a given time, etc., and the letter is the best evidence.

The COURT.—Surely the letter is the best evidence of its contents.

Mr. BLAKESLEE.—Can't he state that he wrote the letter before he produces it?

The COURT.—Yes, but it seems to me like that is proceeding backwards.

Mr. BLAKESLEE.—I think the witness can produce the letter.

A. Yes, sir; here is the letter.

- Q. What is it that you have produced?
- A. I have produced a tissue copy of a letter which I addressed to H. S. Williams on January 26, 1911. [105—47]
 - Q. What does this tissue letter copy form part of?
 - A. Our regular letter files.
- Q. What have you before you with this tissue copy?
- A. One of the regular letter-books, which form a part of our letters or copies of letters, which we wrote out.
 - Q. How was that copy produced?

Mr. LYON.—Objected to as incompetent, no foundation laid, the witness not having qualified to answer the question. I don't think he has any personal knowledge of it.

- A. This letter is signed and dictated by myself.
- Q. (By Mr. LYON.) Did you see this copy made, Mr. Wilson? Have you any recollection of it?
 - A. After a letter is signed—
 - Q. Did you see this copy made?
- A. I don't know that I saw the copy made; I saw the copy of the letter.

The COURT.—Do you want to get the contents of the letter in evidence?

Mr. BLAKESLEE.—We will ask the witness to read the letter and get it into the record.

The COURT.—Where is the original?

- A. I presume Mr. Williams at McKittrick has it.
- Q. Have you endeavored to get it?
- A. I never did.

Mr. BLAKESLEE.—The contents are not material, but the simple fact that he did write such a letter at this time.

The COURT.—I understand that you do not want to get the contents of the letter in, but the fact that he wrote the letter.

Mr. BLAKESLEE.—That is it.

The COURT.—You have got that. He stated that he wrote the letter.

- Q. (By Mr. BLAKESLEE.) Who is the Mr. Williams that you refer to in this letter? [106—48]
- A. He was manager of the Pacific Iron Works at McKittrick, California.
- Q. Did you have any business dealings with him at that time, and, if so, what?
- A. Yes, sir; he was the gentleman who placed the order for the 12½-inch old-style slotted-tee Wilson under-reamer, which order we received on January 26, 1911. 「107—49〕
- Q. Did you have any further correspondence with Williams about that time, and, if so, what?
- A. I received a letter from him in response to this letter of January 26th.
 - Q. Can you produce that letter?
- A. I think it is here among the exhibits. Yes; this is the letter.
- Q. (Witness produces letter.) When did you receive that letter? A. On January 30th, 1911.
- Q. Are you acquainted with the signature of Mr. Williams? A. I am.
 - Q. Whose signature is that attached to this letter?

- A. This is Mr. Williams' signature.
- Q. With relation to the date of the receipt of this last letter, when was it that you took the first steps in and about this reamer matter, and enlarging of the tee, as to which you said you did certain work on the drafting board in your own shop?

Mr. LYON.—That is leading and suggestive, your Honor.

Mr. BLAKESLEE.—The relation between them on this subject, if your Honor please.

A. This letter from Mr. Williams convinced me of the wisdom of changing back to the slotted tee type of Wilson under-reamer, using the heavier slotted tee, and from that time I set about seriously to make the change in the reamer.

- Q. And, with respect to the date of the receipt of this letter, when was it you did the first of this work about the drafting board in connection with this change in the reamer?
 - A. The preliminary work I did on January 26th.
 - Q. The year? A. 1911.

Mr. BLAKESLEE.—We offer in evidence the Williams letter just referred to by the witness as "Defendant's Exhibit Pacific [108—50] Iron Works letter of January 28th, 1911," and ask that the same be so marked and received.

Q. You have referred to a number of parties with whom you discussed the several sketches pertinent to the single-piece key form in the early part of February, 1911. Will you please identify those present a little more particularly.

A. Mr. A. G. Willard was present. He was interested with me in the Wilson & Willard Manufacturing Company at that time. Mr. Knapp, the foreman, Mr. Wilcox, C. E. Wilcox, the salesman, Mr. Robert E. Bole, for whom the Wilson & Willard Manufacturing Company was making pumps, and my brother, W. W. Wilson. I believe they were all present at that conference.

Q. Can you produce any record pertinent to the order you say you received January 26th, 1911, from Mr. Williams, of the Pacific Iron Works, for the slotted tee?

A. I think a copy of the shipping order is here.

Q. What, if anything, do you know about these shipping order slips?

A. This order was dictated by myself, on receipt of the order from the Pacific Iron Works at McKittrick, on January 26th, 1911, and the order was filled on these instructions and shipped. The date of the shipment or delivery is January 26th, 1911, showing that the twelve and one-half inch slotted tee was shipped by express on the day the order was received. This shipment I see is O. K.'d by Grigsby, who was our shipping clerk at that time.

Q. Where have these shipping order slips been since the time you dictated them?

A. They have been filed away among our regular records, except such portion of the time as they were in evidence in this interference case.

Mr. BLAKESLEE.—We offer in evidence the two shipping order slips just referred to by the witness,

attached together, as [109—51] "Defendant's Exhibit Pacific Iron Works, January 26, 1911, shop order slips," and ask that they be so received and marked.

(Marked Defendant's Exhibit 2).

- Q. At about the time that reamer 120 was made over to include the single-piece key, was any other under-reamer with such single-piece key manufactured by the Wilson & Willard Manufacturing Company? A. Yes, sir.
 - Q. What do you know about such other reamer?
- A. A ten-inch Wilson Under-reamer of the singlepiece kep type was made and shipped to the Kern Trading & Oil Company at Kerto.
 - Q. Do you know when that reamer was shipped?
 - A. It was in May, I believe, of 1911.
- Q. How did this reamer compare with reamer 120 as made over?
- A. It was in, practically, the same design, except, of course, being a larger reamer, being for a larger sized casing; and, if I recollect right, the slot in which the key was inserted was placed through from the opposite angle to the one used in making the reamer Number 120, the eight-inch.
- Q. It didn't produce any change in the organization of the reamer?
 - A. Not at all. It was just a shop change.
- Q. Can you produce any record or papers of your company which related to the shipment of that reamer? A. Yes, sir (produces).
 - Q. Please describe what you have produced.

A. This is the shipping receipt on which a teninch Wilson Under-reamer, numbered 496, and one small lever attached, was shipped to the Kern Trading & Oil Company at Kerto, California, by Southern Pacific freight.

Q. (By Mr. LYON.) On what date?

A. On May 25th, 1911. [110—52]

Mr. BLAKESLEE.—We offer in evidence the receipt just produced by the witness, as "Defendant's Exhibit 'B," Specimens of Grigsby's Handwriting, or Shipping Receipt of May 25, 1911."

Q. When did you first have any knowledge whatever of a single-piece key for under-reamers such as that you say was incorporated in reamer 120 when made over on shop border 6904 of February 3, 1911?

Mr. LYON.—That is objected to as calling for the conclusion of the witness.

Mr. BLAKESLEE.—I ask him as to his knowledge of such key.

The COURT.—I think the question is proper.

- A. My knowledge of that style or design of key probably dates back to the time I was working on the two-piece key in 1906 or possibly '07.
- Q. (By Mr. BLAKESLEE.) From what source was such knowledge received?
 - A. My own conception.
- Q. Subsequently to that early time, and prior to the time you made preparations for making over reamer 120 to embody such single-piece key, did you from any other source, or did you not, receive any

information or knowledge with respect to such single-piece key?

Mr. LYON.—That is objected to as leading, and as incompetent, calling for the conclusion of the witness.

The COURT.—I will overrule the objection.

A. No, sir; I did not.

Q. (By Mr. BLAKESLEE.) Prior to the time last mentioned had you ever seen such a one-piece reamer key?

The COURT.—What time is this you are referring to now?

Mr. BLAKESLEE.—In the early part of 1911, when he made preparation to make over reamer 120.

Mr. LYON.—The question is indefinite and uncertain as to time. [111—53]

The COURT.—Answer the question.

A. No, sir.

- Q. (By Mr. BLAKESLEE.) Had you, prior to February 3, 1911? A. No, sir.
- Q. Prior to February 3, 1911, had you ever seen a cut or drawing or any descriptive matter disclosing such one-piece key?

Mr. LYON.—Object to that as leading.

The COURT.—Overruled.

A. Nothing but those which I made myself.

Q. (By Mr. BLAKESLEE.) Prior to February 3, 1911, was such a single-piece key ever described to you, by word of mouth or otherwise, by any other person?

Mr. LYON.—Object to that as leading.

The COURT.—Overrule the objection.

A. No, sir.

- Q. (By Mr. BLAKESLEE.) Can you state, approximately, how many under-reamers you have constructed, or the Wilson & Willard Manufacturing Company has constructed for you, containing such a single-piece key as we are discussing?
 - A. Probably six or eight hundred.
- Q. How many such under-reamers of like kind or description were made by you or for you prior to February 19th, 1913, the date of the application for the Bole Patent in suit?

Mr. LYON.—We object to the question, inasmuch as it calls for a mere guess or approximation. If the witness is able to state positively, I have no objection.

The COURT.—I will overrule the objection.

- A. Probably two hundred.
- Q. (By Mr. BLAKESLEE.) Have you ever seen such a Wilson Under-reamer in use or operation?
 - A. Yes, sir.
- Q. When did you first see such a Wilson Underreamer in use or operation? [112—54]
 - A. In the year 1911.
- Q. How frequently during that year, and prior to February, 1913, did you witness such operation?
- A. Oh, on several occasions. I didn't make many trips into the oil fields at that time.
- Q. What were your principal duties during that period of time?

- A. I remained in the shop as manager. I had men who went to the field.
- Q. Can you produce any record of the shop of your company, the defendant, which is used or has been used or exemplifies what has been used in the shop in connection with the turning out of Wilson Underreamers with this one-piece key?
 - A. I can. (Witness produces two blue-prints.)
 - Q. Please tell us what these blue-prints portray.

Mr. Lyon.—I object to that question, on the ground that the prints must speak for themselves.

The COURT.—I think that is right.

Mr. BLAKESLEE.—All I wish is a general statement of what these are—not a detailed discussion of them.

The COURT.—Do you object to that?

Mr. LYON.—No, if he states generally they are blue-prints of working drawings, or something of that kind. But that is not what his question calls for.

The COURT.—No; I agree with you. State, generally, what these things are.

The WITNESS.—These are copies of regular blue-prints which we use in our shops and which show the dimensions and proportions in making our under-reamers.

Q. (By Mr. BLAKESLEE.) How early were these blue-prints, or blue-prints from the same tracings, used in your shop?

Mr. LYON.—We object to that as incompetent, no foundation laid.

The COURT.—Overruled. [113—55]

A. These drawings bear the date they were completed by the draughtsman, the date being May 6th, 1911; and they have been part of our regular records ever since.

Q. (By Mr. BLAKESLEE.) Is the single-piece key we have discussed shown in these blue-prints? And, if so, where and how marked?

A. They are. They are lettered here in this blue-print as "Drive key—steel."

Mr. BLAKESLEE.—We offer in evidence the two blue-prints, connected together, just discussed by the witness, as "Defendant's Exhibit Wilson Reamer Shop Blue-prints of Tracings of May 6, 1911, and June 2, 1911," and ask that the same be received and so marked.

Mr. LYON.—The only objection we make to them is the objection as to the date. It is incompetent, to prove the date.

The COURT.—I think that objection is well taken. They bear that date, as I understand, but there is no proof that they were really in existence on that date.

Mr. LYON.—I don't see the materiality of it from that standpoint, anyway.

Mr. BLAKESLEE.—The materiality of it we will show.

Q. What can you state, Mr. Wilson, as to the date upon which the tracings from which these blue-prints were made were themselves executed?

Mr. LYON.—Object to that, on the ground that there is no foundation laid. He has not stated that

he knows anything about their dates.

- A. It is one of the regular customs of the shop practice to take the date the drawing is completed and affix the date to the tracing so that you always know in the shop, by referring to the blue-print of such and such a date, what design was made on that date.
- Q. (By Mr. BLAKESLEE.) How early did you see such tracings or [114—56] blue-prints of the same, giving the date as nearly as you can?
- A. I saw those drawings while they were under construction—that is, the tracing from which these blue-prints were made.
 - Q. And when was that?
- A. That was probably shortly before this date, the completion as shown on the blue-print.
- Q. After the shipment of these first two reamers with the single-piece key, namely, those to the Kern Trading & Oil Company, and Norbeck & Nicholson Company, how soon did you institute the manufacture of such reamers generally, or extensively?
- A. I think I determined to adopt that style of reamer probably in April or May of 1911. The drawings were made up, and we made that style of an under-reamer thereafter, unless reamers of other types were specified when ordered.

Mr. BLAKESLEE.—In view of the testimony of the witness subsequent to the question of date of execution of the tracings of the blue-prints last referred to, we wish to again offer the same in evidence, and ask that they be marked as before requested.

Mr. LYON.—I object to them as incompetent, no foundation laid, and ask leave to cross-examine the witness in regard to one or two facts in relation thereto, in that connection.

Mr. BLAKESLEE.—Well, we don't like to be interrupted, if your Honor please.

The COURT.—I think counsel has got the right to examine the witness about this exhibit before it is received in evidence.

Mr. BLAKESLEE.—We will hold it then, and offer it again later, if necessary. We have no objection, however, to questions in their proper order. Go ahead.

- Q. (By Mr. LYON.) These prints have been made from a tracing, haven't they?
 - A. They have.
- Q. They are not the original drawings? [115—57]
- A. They are copies of the original drawings, as nearly as reproductions can be made.
- Q. And there have been a number of changes made in the original drawing since its first production in 1911, haven't there?
- A. Possibly, in that way of proportions or dimensions.
 - Q. There have been changes made, haven't there?
- A. Possibly in the way of proportions or dimensions, yes.
 - Mr. LYON.—We stand on the objection.
- Q. (By Mr. BLAKESLEE.) Why is it that the original tracings are not produced at this time?

Mr. LYON.—You can have the same force and effect of these prints as though the tracings themselves were here. My objection is that these are not either of them what they had in May, 1911, according to the evidence of the witness. There have been changes made in them since then, and, as they exist to-day, they are a later drawing.

Q. (By Mr. BLAKESLEE.) Will you point out what changes, to your knowledge, have been made in the showing of these blue-prints?

The COURT.—I understand the witness says, "Possibly." Now, who made these drawings, and who made the changes? It seems to me we are wasting time by having this witness testify about these things when there ought to be some other witness who knows exactly about this. Is not that right?

Mr. BLAKESLEE.—That is right, your Honor. The COURT.—Why waste time with this witness? Mr. BLAKESLEE.—I want to show the extent of this witness' knowledge, if he knows of any changes.

A. The changes that have been made are merely minor ones in regard to the dimensions. The general design of these drawings haven't been changed from the general design of the articles themselves.

Mr. LYON.—We move to strike the answer from the record— [116—58]

The COURT.—Stricken out. It is all a conclusion of the witness.

Q. (Mr. BLAKESLEE.) Who made the original tracings of the drawings of those blue-prints?

A. A man by the name of Bandell.

- Q. Where is he at the present time?
- A. I don't know.
- Q. Have you attempted to locate him recently?
- A. Not for eight or ten months.
- Q. (By the Court.) Do the original drawings show the changes that have been made?
- A. I think, your Honor, that the changes would be merely erasures of fractional portions of an inch or inches.
 - Q. Wouldn't that show on the original itself?
 - A. The paper here?
 - Q. No, no. On the original?
- A. You could see that the erasure had been made and another figure substituted.

The COURT.—Yes. Now, if you will produce the original paper we can see just exactly what changes have been made.

- Q. (By Mr. BLAKESLEE.) Can you produce the original papers at this time?
 - A. I think I can; yes, sir.
 - Q. Please take steps to do so.
 - A. I think they are at our shop among the records.

The COURT.—Bring them in in the morning. Pass to something else.

- Q. (By Mr. BLAKESLEE.) In connection with introducing the Wilson reamer with the single-piece key, did you put out any printed matter for general circulation?
 - A. Yes, sir.

Mr. LYON.—Objected to, as irrelevant and immaterial, and [117—59] self-serving.

Mr. BLAKESLEE.—We are showing the diligence of this party in connection with the question of priority, as to how generally he made this invention known. We are attempting to anticipate this patent and to show that this was the inventor. And that is material under all the decisions.

Mr. LYON.—It is merely a self-serving statement made after everything was done. We will concede, though, that they have been marketing the invention since June, 1911, and advertising and selling it.

The COURT.—Since June? Not prior to June? Mr. LYON.—The earliest date they have proved is June.

Mr. BLAKESLEE.—Marketing it and selling it. Mr. LYON.—Yes, sir.

Mr. BLAKESLEE.—And that they have been successfully operating it as early as July, 1911.

The COURT.—That is one admission they have made. Now, if you want another—

Mr. BLAKESLEE.—I ask counsel if they will admit, on the other question, that—

Mr. LYON.—I will take your proof on that. I don't want to be foreclosed from examining on that question.

Q. (By Mr. BLAKESLEE.) Can you produce any such printed matter at this time?

The COURT.—I thought you accepted the stipulation instead of the printed matter.

Mr. BLAKESLEE.—I wanted a specific showing of what it was.

Mr. LYON.—Then we withdraw the stipulation,

and stand on the objection that it is irrelevant, immaterial and incompetent.

Mr. BLAKESLEE.—We are satisfied to prove it.

A. I can.

- Q. (Witness produces booklet.) What is this booklet you have produced? [118—60]
- A. This is a descriptive circular of the one-key type of Wilson under-reamer.
- Q. When did you first, or how did it come about that you put out such a booklet, and when, and to what extent?
- A. Probably the latter part of the year 1911 these books were produced. Maybe not until the first part of 1912. It is our custom to print a circular of the different articles we manufacture, and this was in keeping with that custom.
- Q. And how extensively was it put out to the public?

Mr. LYON.—Object to that as irrelevant and immaterial, needlessly encumbering the record.

The COURT.—Objection overruled.

- A. There were several thousand of them printed and mailed to different oil companies throughout California and the eastern oil fields, foreign oil fields.
- Q. (By Mr. BLAKESLEE.) Can you in any way fix the time at which these booklets were printed and circulated?
- A. I can probably show you the invoice. The photographs were made by Putnam & Valentine, of this city; and here are invoices and statements covering their charge for those photographs dated June 24, 1911.

Q. And the statement is dated August 1st, 1911?

A. Here is a duplicate delivery tag from the Western Lithograph Company, delivering to the Wilson & Willard Manufacturing Company on January 13, 1912, 715 of these booklets. This was a portion of our order.

Mr. BLAKESLEE.—We offer in evidence the booklet just discussed by the witness, as "Defendants' Exhibit Wilson Reamer Booklet of 1911," and ask that the same be so marked and received.

Mr. LYON.—Objected to as incompetent, no foundation laid, and as irrelevant and immaterial.

(Discussion). [119—61]

The COURT.—Well, bring one decision in the morning; and, in the meantime, pass to something else.

Mr. BLAKESLEE.—We offer in evidence the bill and statement of Putnam & Valentine, attached together, as "Defendants' Exhibit Putnam & Valentine Paid Photograph Account," and ask that the same be received and so marked.

Mr. LYON.—Those are subject to the same objections before made.

The COURT.—I will overrule that objection.

Mr. BLAKESLEE.—We further offer in evidence the delivery slip of booklets referred to by the witness as "Defendants' Exhibit Wilson Reamer Booklet 1911 Delivery Slip," and ask that the same be received and so marked.

Mr. LYON.—Same objection.

The COURT.—Overruled.

- Q. (By Mr. BLAKESLEE.) Are you acquainted with the complainant, Robert E. Bole?
 - A. I am.
 - Q. How long have you known Mr. Bole?
 - A. Since the year 1904 or 1905.
 - Q. How did you come to first meet Mr. Bole?
- A. Mr. Bole was an employee of the Bakersfield Iron Works, in Bakersfield, California, at the time I was manager of that institution.
 - Q. What was his work there?
 - A. He was a helper, or machinist.
 - Q. How long did you employ him?
 - A. Possibly a year at that place.
- Q. How long did he continue in your employ at any other place?
- A. He began as an employee at the Wilson & Willard Manufacturing Company's plant in the year 1907, I believe.
 - Q. That was at what place? [120—62]
- Q. That was on Santa Fe Avenue, near 9th Street, in this city.
- Q. What was the nature of Mr. Bole's work when so employed?
- A. He was a machinist; worked on a machine or on a forge.
 - Q. How long did he continue in that employment?
- A. Well, he did machine work for us, or shop work, for probably a year or so; maybe longer.
- Q. Subsequent to that time did you have any relations with Mr. Bole? And, if so, what?
 - A. Yes, sir. Mr. Bole had a patent on an oil well

pump. Mr. Willard, my partner in the Wilson & Willard Manufacturing Company plant, acquired a half interest in this patent and those pumps were manufactured by the Wilson & Willard Manufacturing Company, and Mr. Bole working in the shop part of the time, and part of the time in the field soliciting business.

Q. Did the department, or those interests, manufacture anything but the Bole pumps? And by that I mean the Bole Pump Company?

A. No, sir. Their patents covered the Bole pumps. I think that was all that we manufactured for them.

Q. Do you know whether the Bole Pump Company, or the Bole department—if we may call it that —of the Wilson & Willard Manufacturing Company ever manufactured any under-reamers or parts thereof?

A. No, sir; they did not. They were merely customers of the Wilson & Willard Manufacturing Company, with only one or two exceptions: They owned only one or two machines. They were little bits of lathes, of old style, which belonged to Bole personally and which were used in the manufacture of pumps. Aside from that the Bole Pump Company owned no machinery, and were not in the position to manufacture under-reamers or any other tools.

Q. On what financial basis were the dealings between the Wilson & Willard Manufacturing Company and the Bole Pump Company conducted?

[121—63]

Mr. LYON.—Objected to as irrelevant and immaterial.

The COURT.—What is the materiality of any of that?

Mr. BLAKESLEE.—I wish to show the relations between these parties; and I am laying the foundation to prove the disruption of these financial relations, and the attendant circumstances which led up to this.

Mr. LYON.—All those matters were settled by contract in writing, and the fact that they were associated together has been shown. If those facts have any other relevancy or materiality you can readily state it.

Mr. BLAKESLEE.—I want to show that their relations became strained and that there was a certain time when they were disrupted.

The COURT.—You will admit that, Mr. Lyon?

Mr. LYON.—Yes.

(Discussion).

Q. (By Mr. BLAKESLEE.) Can you produce a memorandum of a settlement of certain matters which you had with Mr. Bole, of the Bole Pump Company, when you severed relations with him?

A. Yes, sir.

Q. (Witness produces a letter.) When was this settlement entered into?

Mr. LYON.—We object to that, on the ground that the document is the best evidence.

The COURT.—Do you claim it is a different date than the document bears?

Mr. BLAKESLEE.—No, sir.

The COURT.—Then the document shows for itself, I wish you would read that instrument.

(Mr. Blakeslee reads paper).

(Discussion).

The COURT.—Now, you say you have a letter there. [122—64]

Mr. LYON.—That letter don't touch this settlement. It only goes to the question of whether Mr. Bole claimed they were estopped from using this invention.

The COURT.—Do you object to the letter?

Mr. LYON.—It is not germane to anything before the Court at the present time. I don't object to the letter if the rest of the correspondence is produced. (Discussion). I object to the letter so far as its use with reference to this settlement is concerned. So far as the settlement is concerned I contend it is embodied in this written instrument. If there is any other purpose of the letter, notice to quit using the invention, or anything of that kind, that is separate and distinct. But that portion of the letter which refers to any law suit between them has nothing to do with the question of whether or not this agreement of settlement can be set aside or amplified by parol evidence of a contemporaneous parol agreement based on the same consideration and not in writing.

- Q. (By the COURT.) Mr. Wilson, who prepared this settlement? A. This agreement?
 - Q. Yes. A. I dictated that.

Q. Who was present?

A. Mr. Bole, Mr. A. G. Willard, and Mr. W. W. Wilson. I believe they were present when I was dictating the document. They were there while the discussion was going on as to its terms.

Q. There was a disagreement? A. Yes.

Q. Did you have an attorney? A. Yes, sir.

Q. Who was your attorney?

A. Mr. F. A. Stephenson.

Q. Did you cousult him about this settlement? [123—65] A. No, sir; I did not.

Q. At the time you got up this settlement you had this letter that Mr. Blakeslee has?

A. Yes, sir; we had this letter. Mr. LYON.—Read the letter, if you want to.

The COURT.—I am inclined to think that letter ought to be read in evidence.

Mr. LYON.—Read it, then.

(Mr. Blakeslee reads the letter.)

The COURT.—The Court will adjourn until ten o'clock to-morrow morning.

Mr. LYON.—I understand that letter is offered in evidence the same as the contract of settlement, and in connection with it?

The COURT.—Sir?

Mr. LYON.—I say, I understand the letter has been offered in evidence by Mr. Wilson, and received, the same as the contract of settlement that was produced. Is that correct?

Mr. BLAKESLEE.—We haven't offered it, but we will, right now.

The COURT.—I understand it was offered and read in evidence.

Mr. BLAKESLEE.—I beg pardon. My intention was to offer it in evidence as "Bole letter of January 17, 1911."

(Adjourned until March 24th, 1915, at 10:00 o'clock A. M.) [124—66]

Wednesday, March 24th, 1915. 10:00 o'clock A. M.

Mr. BLAKESLEE.—Your Honor said yesterday that you wished a decision or two on this question of diligence.

The COURT.—Read the decision.

Mr. BLAKESLEE.—I have several decisions here. (Reads from 161 Federal Reporter, 122.)

The COURT.—That is simply putting the thing to a useful purpose; and, so far as I can see, that decision does not relate to anything about circulating literature.

Mr. BLAKESLEE.—That is part of the diligence of the inventor in putting it before the public. We wish to show what this inventor, upon whom the burden of proof is, did about the exploitation of his invention.

The COURT.—He has testified to that. He has testified that this company put this thing into use, and sold it, and that he also sent out circular advertisements. Now, the contents of those circulars do not seem to me to be material.

Mr. BLAKESLEE.—Excepting to show that they are of such nature as supports his testimony.

The COURT.—I think it would be self-serving entirely.

Mr. BLAKESLEE.—It shows his campaign of diligence. The burden is on us to show that Wilson was the first inventor. He filed his application later, and we must show that he is entitled to this invention because of the full need of activity on his part, and I consider it important as far as possible to show such activity. If your Honor thinks it is surplusage, of course—

The COURT.—That is the way I look at it. The contents need not be stated. He has testified orally, and I apprehend there cannot be any dispute about the fact, that the defendants did manufacture this invention and sell it to the public.

Mr. BLAKESLEE.—Prior to the date of the application for the patent in suit. [125—67]

The COURT.—And he testified that he sent out circulars describing the invention.

Mr. BLAKESLEE.—But, in a way, your Honor, that is stating a conclusion, and this is offered to support what he states.

The COURT.—I think that is going too far.

Mr. BLAKESLEE.—I want the record to be as full as possible, although we don't wish to stuff it, and for that reason I request that it go in.

The COURT.—I sustain the objection to that written document offered in evidence— the pamphlet.

Mr. BLAKESLEE.—At this time I wish to offer in evidence a certified record, certified by the Acting Commissioner of Patents under date of the 8th day

of December, 1914, setting forth the data of the application of Elihu C. Wilson, the present witness, defendant in this case, for patent for under-reamers, and the corresponding data pertinent to the application of the complainant Bole for letters patent in suit, and the data pertinent to the declaration of interference as to the subject matter of the letters patent in suit between the party Bole and the party Wilson as and particularly for showing the final steps in the activity of Wilson, which was a necessary final step if he is to prevail in any form as the rightful patentee—the final step in his race of diligence in presenting his application for patent, and it shows the party Wilson filed his application only twenty-seven days after the application by party Bole.

The COURT.—Do those documents claim that he is the inventor of this device?

Mr. BLAKESLEE.—No; that is not shown, I believe.

Mr. LYON.—In regard to the last offer, we object to it, on the ground that it is incompetent, not the best evidence; on the ground that it is immaterial; and upon the ground that it simply relates to a certain contest or suit or proceeding in a department [126—68] of the Government, the United States Patent Office, with which this court is not concerned; and upon the further ground that the alleged document is fragmentary, and that, insofar as there is any attempt to set forth the dates or serial numbers of the filing of the respective applications, the paper referred to is a mere recital, and not a certificate of

that fact, and is not the proper method of proof. It has been held in this court that the proper method to prove the date of the filing of an application for patent is the certified copy of the application. That is the general rule, and there are a large number of decisions to that effect. To illustrate that, if your Honor has before you our exhibit of patent in suit, if you will turn to that you will find on the drawing and on the specification the recital of the date of application, of the filing of the application, and on the specification a recital. That has been held not to be proof, and to be a mere recital, and that the Court will require, if a party desires to prove such application dates, a certified copy of the record. Now, my objection is this, that that is a recital of a fact and not a copy of the record. There is no statute making such a certificate as this evidence, and the only thing that is evidence is a copy of the record itself, and that record is the file wrapper and contents of the application. That matter has been passed upon so often by the courts that there is no dispute of the question. That, of course, is not the only line of objection I make. We further object that this Court is not interested in any manner in these interference proceedings, and that if any part of the record is produced the whole of it should be produced and not a fragment.

Mr. BLAKESLEE.—I will state that we have ordered from the Commissioner of Patents a certified copy of the application of Mr. Wilson to which counsel refers; and that has not arrived, but I expect that

it will arrive before the argument of the case. [127] -69] As to the interference proceeding this is a certified statement by the Acting Commissioner of Patents that there is pending there this proceeding of interference, and I shall file with the Court, I hope, before the conclusion of the argument of this case, a certified copy of the decision, which I am informed has been rendered in that interference proceeding, on behalf of Mr. Wilson, and then shall attempt to show your Honor that the decisions are consistently to the effect that the decisions of that tribunal on quesions of prior invention are highly persuasive to this court. So that it is material, and that certified document cannot do anything less than what it purports to do, namely, give the decision of this interference and the respective data. That is one step in our showing of diligence—that application to file, and that we are contesting this patent in suit.

The COURT.—What is the purpose of this offer of this particular paper?

Mr. BLAKESLEE.—I have stated, I think, the purposes.

The COURT.—'This is to certify that the annexed is a true copy from the records of this office of the declaration in interference'—. (Reads.) Now, that purports to be a copy from the records. It don't read like a copy from the record, but it is certified that it is a copy from the records, and it is dated January 21, 1914. There is a statement of what the claims are.

Mr. LYON.—I do not maintain that if the preliminary statements there are material, or anything of that kind, that this is not a true copy of them and introducable in evidence.

The COURT.—What is that?

Mr. LYON.—I do not claim that if the preliminary statements are proper to be offered in evidence this is not proper evidence of it. My objection is that that don't purport to be more than a mere recital. It is not a certificate of the record of the [128—70] filing of either of those applications.

The COURT.—This is a certified copy of the record. (Discussion.) This certifies that it is "a true copy of the records of this office of the declaration of interference dated January 21, 1914." Now, it can't be received for anything else except what it purports to be a certified copy of. If you object that that is not the true date of the filing of this instrument, and want to prove it is not the date—

Mr. LYON.—Not of that instrument. We object on the ground that it is a mere recital, so far as it sets forth any dates or serial number or numbers of any alleged application or applications.

The COURT.—You can argue that on the argument of the case. The document will be received in evidence.

Mr. LYON.—The other phase of the question is that I don't see where the materiality of it comes in. This proceeding in the Patent Office is an independent proceeding and has no bearing on this case. We are entitled to and will have here a new hearing on

a new record, de novo. The question here is an entirely different one from the one there.

The COURT.—I agree with you in that regard. But Mr. Wilson claimed the right to a patent on this invention prior to the expiration of two years. That is certainly material here.

Mr. LYON.—That is the one fact as to which I object that this instrument does not prove.

The COURT.—I don't know whether that is sufficient proof on that subject, now. I can't decide that now.

Mr. BLAKESLEE.—We wish to argue that.

The COURT.—Proceed with your case.

Mr. BLAKESLEE.—We ask that this be marked "Defendant's Exhibit Certificate of Patent Office as to Wilson vs. Bole Interference."

The CLERK.—That will be Defendant's Exhibit 3. [129—71]

Q. (By Mr. BLAKESLEE.) Refering to this letter which was read late last evening, in connection with the argument that it shows that the party Bole, being under debt to the party Wilson, and under such circumstances did make, at that time, and at that late date, this claim that he was entitled to something in and about this invention—I want to ask the witness further some questions with relation to the matter. Will you please state what, if anything, transpired at the time you settled certain matters with Mr. Bole, on or about the 1st of February, 1913, namely, in connection with this key matter referred to by Bole in this Exhibit "Bole Letter of January 17th, 1913."

Mr. LYON.—That question is objected to, on the ground that it appears that the settlement referred to was consummated by a contract in writing, and that this is simply an attempt to change, alter, vary and modify the terms of such contract in writing by parol proof of an oral contemporaneous agreement. Therefore it is incompetent for any purpose.

The COURT.—(After argument.) I will let any evidence of what they said between themselves in and consider on the argument whether or not it bears any weight on the subject of proving prior invention.

A. A few days after the receipt of this letter, my partner, at that time Mr. A. G. Willard—

Mr. LYON.—I object, on the ground that the witness is not confining himself to the question.

A. (Continuing.) After some delay—I was unable to have a conversation with Mr. Bole. A few days after this letter was written, at Mr. Willard's suggestion I met Mr. Bole and discussed the subject of this letter. I attempted to explain to Mr. Bole that he did not know when a man was trying to be friendly toward him and when he was endeavoring to help him, as we had for a long time; and before the conversation was through Bole seemed to have [130—72] a very different opinion—

The COURT.—Now, Mr. Wilson, I wish you would, so far as it is possible, state what was said by you and what was said by Mr. Bole. Don't tell what you conclude was the meaning of what was said, but state what was said.

A. I said to Mr. Bole, "You don't know when a

man is trying to befriend you. You have neglected your business, and you know it, and in my effort to help you out I have sent some dunning letters out to customers who are away in arrears of your account for money you should have had long ago. This is only in line with what I did when we were managing the business for you, and I don't see that we have injured your business by so doing." Mr. Bole replied he was probably hasty in writing this letter, and if he had it to do again he probably would not do so. I said, "Now, in regard to any claim to the invention of this key you have in mind, why haven't you told me before you thought you were the inventor of it? This is the first intimation I ever dreamed of that you claimed any part whatever in the invention of that kev." He said, "Well, be that as it may, I will do nothing further with it, anyway. If we can get our accounts here settled satisfactorily, I will do nothing further with the key." Now, after having these preliminary terms of this agreement discussed between Mr. Willard, Mr. Bole and my brother, W. W., and myself, I dictated this agreement which is in evidence, and at the time of dictating it I had the idea that it had no part—

The COURT.—Don't state what you had the idea of.

A. (Continuing.) It was my opinion.

The COURT.—That is not material. State what was said between you and Mr. Bole.

A. (Continuing.) Mr. Bole said if he could get a satisfactory settlement of his account he would do

nothing further with [131—73] the key matter. I was endeavoring to explain why I wished to put it in that agreement.

The COURT.—That is not material.

Mr. LYON.—I move to strike the entire answer from the record, and exclude it from consideration, on the grounds stated in the objection.

The COURT.—I think the evidence he has given is relevant and material, and it will stand.

Q. (By Mr. BLAKESLEE.) Can you state any further, or with any further particularity, anything that was said by yourself or Mr. Bole at that time?

Mr. LYON.—We object to that, on the ground that that is not the proper method of proving a conversation. The witness has not been asked whether he has given the whole conversation.

The COURT.—I think the witness is entitled to testify to the whole conversation, and I will permit the counsel to suggest to the witness any part of the conversation that the witness may have overlooked. Of course, the value of testimony coming in that way is different from the value of testimony that the witness is able to state without being led or directed; but we are entitled to all of the evidence on that subject.

A. You refer to the time this contract was written up?

Q. (By Mr. BLAKESLEE.) Yes.

A. When the contract was returned from the stenographer, I was reading a copy of it and Mr. Bole was reading a copy of it, and Mr. Bole stated, "I see you have made no mention of the key matter

in this agreement." I replied, "Bob, I don't believe it has any place in this contract. This is a contract between the Bole Pump Company and the Wilson & Willard Manufacturing Company; and whatever agreement. if you think you have any rights at all to this key, that would be made between you and I, [132—74] would be a personal matter. But, it may be a part of this contract, in consideration of the contract, as you suggested that if you can get a satisfactory settlement of this pump account you would agree to waive any claim that you may have to this key—" I said, "It may to that extent belong in this contract; but I hardly think it does." Now, I probably should have gone to a lawyer.

The COURT.—That will be stricken out. While it has no place in this case, it is probably true.

Q. (By Mr. BLAKESLEE.)—Did Mr. Bole say anything further at this time in that connection?

A. Mr. Bole replied, "Well, I will do nothing further with the key matter. I will give you no further trouble with that."

Q. And when had Mr. Bole first asserted to you, or when had you first received knowledge of his assertion, or any right whatsoever with respect to the origination of the single-piece key under discussion?

Mr. LYON.—Object to that as leading, and as incompetent, calling for the conclusion of the witness. The witness might state the facts.

The COURT.—I will overrule the objection.

A. This letter of January 17th, written by Robert E. Bole, is absolutely the first intimation that ever

came to me, or notice, that Mr. Bole claimed to be the inventor of that key.

- Q. (By Mr. BLAKESLEE.) Are you acquainted with Edward Double, the president of the Union Tool Company, one of the complainants in this case?
 - A. I am.
 - Q. What line of business is he engaged in?

Mr. LYON.—Object to that as irrelevant and immaterial in this case.

The COURT.—I don't see the materiality of that. (Argument.) [133—75] I sustain the objection.

Q. (By Mr. BLAKESLEE.)—I will ask you if you have produced this morning the original shop tracings of May and June, 1911, which the Court requested you to bring with you, namely, the tracings of Wilson under-reamers with the single-piece key:

Mr. LYON.—I object to the question insofar as it assumes that that tracing was made at the time indicated.

The COURT.—Objection overruled.

- A. (Witness produces two tracings.)
- Q. (By Mr. BLAKESLEE.)—Will you please state when these tracings were made, to your knowledge.

Mr. LYON.—Objected to, on the ground that it is incompetent, no foundation laid, the witness not having qualified to answer the question. It already appears they were made by some draughtsman.

Mr. BLAKESLEE.—Nevertheless the witness may know when they were made.

- A. These tracings were made in May or June of 1911.
 - Q. And where have they been since that time?
- A. In our files in the office of the Wilson & Willard Manufacturing Company.
- Q. Have they since that time in any respects been altered, and if so, please state, so far as you know?
- A. There have been a few alterations made in regard to the length of this tool, and the length of the tee, and the area of a small bearing-face. This dimension J on the tee-bar has been changed from its original dimension, either increasing or diminishing that dimension. I don't know. The thickness of the drive-keys has been altered. The taper and length of the pilot-keys has been changed somewhat. Also the thickness of the wedge-key has been altered.
- Q. Has any alteration been made in these tracings with respect [134—76] to that part thereof which discloses this single-piece key and is marked on the tracings "Drive-key—steel"?
 - A. No, sir.
- Q. (By the COURT.) Do these figures that have been changed in any way relate to that?
- A. They relate merely to the thickness of material of which the key was made.
- Q. (By Mr. BLAKESLEE.) Do the changes in any way relate to the face dimensions of such key?
 - A. No, sir; I believe not.
- Mr. LYON.—We move to strike the answer from the record on the ground that it is not responsive to

the question. The belief or opinion of the witness is not competent.

The COURT.—Motion granted.

Q. (By Mr. BLAKESLEE.) To your knowledge have any changes been made in these tracings, or in the dimensions depicted thereby, with respect to the superficial area of this last identified key and of the flat face thereof?

Mr. LYON.—We object to that as leading. This witness is an intelligent man, and if they will ask him what changes there are there he will state.

The COURT.—I suppose these drawings show for themselves, don't they, if there have been any alterations made?

Mr. LYON.—They ought to.

The COURT.—Unless there has been something added to the drawings. Let me ask the witness.

Q. When did you first see those drawings?

A. I saw them while they were being made, in May and June, 1911.

Q. Did you see them just after they were completed? A. Yes, sir; and many times since.

Q. Now, has there been anything added to those sheets, in [135—77] the way of drawing, since 1911?

A. The only changes, your Honor, are merely slight details, in order to use standard stock or materials which we could buy.

Q. I understand that. In the drawings themselves have there been some changes? You spoke awhile ago about changing these figures. Now, have there

been any changes in the drawing?

- A. There have been one or two pencil changes on the drawings, yes, sir.
 - Q. Is the ink the same?
 - A. The ink has not been changed.
- Q. Has there been any change in the drawing of the "drive-key—steel"?

 A. No, sir; no change.
- Q. You are sure that drawing was on there when this drawing was made in June, 1911?
 - A. Yes, sir.
 - Q. And you saw it at that time? A. Yes, sir.

Mr. LYON.—I suppose the purpose of the examination is to offer these in evidence. I would like, before the offer is considered, to cross-examine the witness for a moment.

The COURT.—Certainly. You have a right to cross-examine him. Are you done, Mr. Blakeslee?

Mr. BLAKESLEE.—On that score, yes. (By Mr. LYON.)

- Q. You stated, I believe, there has been nothing added to these drawings since they were made and when you first saw them completed, in May, 1911?
- A. I stated that some pencil outlines had been added.
 - Q. That is all?
 - A. That is all I see now. [136—78]
- Q. Now then, please turn to the right-hand side, "Revisions." The first you find there is "Revised 8-1-11," meaning August 1st, 1911, does it?
 - A. "Revisions"; yes, sir.
 - Q. Then that was the time that this so-called

"pilot-key" was put on this drawing, wasn't it?

A. I am not sure whether that is what that statement means or not.

Q. You don't know what that means, then? A. No.

Mr. LYON.—That is all. We renew our objection, on the ground that there is no foundation laid.

The COURT.—Now, as I understand, there was some other man made these, although they were made under his supervision. Is he here?

Mr. BLAKESLEE.—Yes, sir. He is not here, and cannot be reached.

Q. Can he? Bandell?

A. No; the last we heard of Bandell he was in Chicago. [137—79]

Q. Have these tracings been in regular shop use since that time?

Mr. LYON.—Objected to as incompetent and no foundation laid.

The COURT.—That is calling for the conclusion of the witness.

Q. (By Mr. BLAKESLEE.) How have these tracings been used since the time they were made?

Mr. LYON.—Objected to as leading and assuming a fact not testified to by the witness and not appearing that he has any personal knowledge that these things as they now stand have ever been used since they were made in 1911.

The COURT.—I think he can state what he knows about that subject.

A. These tracings were used in making blue-prints

which were sent to the shop and which were observed in manufacturing the Wilson under-reamers.

Q. (By the COURT.) Who made the blue-prints?

A. Many of these blue-prints we have made by a concern who do that business in the Bryson Block in this city.

Mr. BLAKESLEE.—We wish to offer these in evidence, but I want the witness to state if it is possible for them to conduct their business without these tracings.

The COURT.—You can offer them and if you want to subsequently withdraw them after the trial you can substitute blue-prints. Have you any objection to that, Mr. Lyon?

Mr. LYON.—No, I haven't any objection to that, but I have an objection to the offer.

Mr. BLAKESLEE.—We offer in evidence the two tracings.

The COURT.—The documents will be received.

Mr. LYON.—I supposed I might have an opportunity to state that we object to them on the ground that they are incompetent and no foundation laid, and unidentified.

The COURT.—I understand that you made that objection, and it [138—80] is overruled.

Q. (By Mr. BLAKESLEE.) During the early stages of your development of this Wilson reamer with the single-piece key, did you put the matter before anyone as to the general nature of the key in any respect in letter form? A. Yes, sir.

Q. To whom did you address any such communication?

A. I remember a letter I addressed to Mr. J. A. Kibele, Bakersfield.

Q. Can you produce that letter?

A. I can produce a copy of it.

Q. Have you attempted to get that letter?

A. I was in Bakersfield Sunday and attempted to get in touch with Mr. Kibele for the purpose of getting that letter, but he was out of town.

Mr. LYON.—Produce your letter-press copy. I am not going to object to it.

Mr. BLAKESLEE.—The witness produces a letter-press book of the Wilson & Willard Manufacturing Company, containing such letter, and we ask that the same be copied into the record.

Q. (By Mr. LYON.) You signed this letter yourself on the day it bears date, did you not, Mr. Wilson?

A. I did.

(Mr. Blakeslee thereupon reads said letter in evidence, as follows:) [139—81]

"Feb. 28, 1911.

Mr. J. A. Kibele,
Bakersfield,
California.

Dear Sir:

Your very kind favor of the 26th inst., concerning position for Tool Dresser is to hand. Have wired our party that we can hold the position for one week. Will let you know at once on receipt of Wire whether to hold the position for him or not. We thank you

very kindly indeed for your attention to this matter, and you can be assured we appreciated it very much.

We are just making another change in our Underreamer which we believe will please you. We find that we can increase the strength of the slotted Tee, Making it at least twice as heavy. By making it of Nickel steel and with more than twice the weight of stock in it than it had before. Believe we will have the strongest Reamer we have ever had. Instead of the double keys or wedged keys previously used, we have devised a key of a single piece. It is as broad as the two keys combined, which we previously used, which will make it stronger than they were. It can be driven in under the Spring, taking up the tension on the spring. It has a shoulder at the bottom which goes down into the bore of the Reamer, preventing it from working out either way, as the compression of the Spring holds it down into place. Either end can be pried up with a screw driver or coal chisel, and can be driven right out. We are going to put in the bottom bolt.

The slotted tee of course strikes against the key before it can be drawn down far enough to strike the bottom bolt. Thus the bending or jamming of the bottom bolt will be stopped. All who have seen this Reamer think it is the best thing we have ever devised. We draw a sketch herewith to show the shape of the key. What do you think of it?

Yours very truly,
WILSON & WILLARD MFG. CO.,
Per E. C. WILSON,
Pres." [140—82]

The COURT.—What is the date of the letter?

Mr. BLAKESLEE.—February 28, 1911, namely, twenty-five days subsequent to the date of the order for making the reamer 120 with the single-piece key.

Mr. BLAKESLEE.—I understand there was some objection previously to offering these blueprints of these tracings, and I take it now that they need not be offered in view of the tracings being produced. Also, as to the offer of the shipping receipt for the Norbeck & Nicholson Company reamer and the Kern Trading & Oil Company reamer, may those be received?

The COURT.—They can be marked.

Q. (By Mr. BLAKESLEE.) Will you please state if you know when this reamer in evidence "Defendant's Exhibit 1," was made.

A. It is one of our recent productions, made in the last month or so, I should say.

Q. Please compare the same or contrast the same with reamers with the single-piece key which you made prior to February 19, 1913, the date of the Bole application.

Mr. LYON.—Do you claim that it is any different?
Mr. BLAKESLEE.—I hope he will say that they are the same.

Mr. LYON.—I am ready to concede that they are the same unless you claim that they are not.

Mr. BLAKESLEE.—No; I just want the record to show.

The COURT.—Well, that statement then is sufficient.

Q. (By Mr. BLAKESLEE.) Prior to your making out the order of February 3, 1911, for making over reamer 120 to include the single-piece key, will you please state whether or not Mr. Bole of the complainants ever put before you or brought to your attention or made known to you in any manner directly or indirectly a single-piece key in any respect the same or like that disclosed in the exhibit reamer before us, "Defendant's Exhibit No. 1"?

Mr. LYON.—We object to that as leading and as incompetent, [141—83] calling for a conclusion of the witness, and not for a statement of facts.

The COURT.—The objection is sustained.

Q. (By Mr. BLAKESLEE.) Prior to your making out the order for changing over reamer 120 to include the single-piece key, had you received from Robert E. Bole, of complainants, any information with respect to the single-piece key such as embodied in that under-reamer?

Mr. LYON.—I object to that as leading and calling for a conclusion.

The COURT.—That is calling for a conclusion of the witness, Mr. Blakeslee. Ask him to tell all that Mr. Bole ever said to him about the thing. That is the way to get at it. If he didn't say anything, he can say so.

Mr. BLAKESLEE.—Of course, it might be by some other method than statement, whether it was put before him in any way.

Q. Did Mr. Bole put before you in any way prior to your making out the order for making over reamer

120 with this single-piece key such as was finally built into that reamer, and by that I mean the key as a design, construction or the like?

Mr. LYON.—I object to that as leading, incompetent, calling for the conclusion of the witness.

The COURT.—Let Mr. Wilson state whether Mr. Bole ever exhibited or said anything to him about a key that he invented prior to this time.

- A. He did not.
- Q. (By the COURT.) No key at all?
- A. No key whatever.
- Q. He never said anything to you on the subject prior to the receipt of this letter?
 - A. Not about a key.

The COURT.—Is that what you want, Mr. Blakes-lee?

Mr. BLAKESLEE.—Yes, sir. Of course, we admit that there was [142—84] discussion about prying out the key, but what I mean is the key itself and its design.

The COURT.—He testified what Mr. Bole said about prying out the key.

Q. (By Mr. BLAKESLEE.) At all times when you have referred in your testimony to the Wilson & Willard Manufacturing Company and yourself, are we to understand that you have referred to the defendants in this case?

A. Yes, sir.

Mr. BLAKESLEE.—Counsel may cross-examine.

Cross-examination.

(By Mr. LYON.)

- Q. Mr. Wilson, when was it that the enlarged slotted tee-bar was first completed for the rebuilding of reamer 120 at the shop of the Wilson & Willard Manufacturing Company?
- A. I do not remember the exact date. Our records will show that.
 - Q. Have you such records before you?
 - A. I believe we have.
 - Q. Refer to them and answer the question.
- A. These are the cards of the key. I want the cards of the tee, if we have them here. It may be that they are not here at all. The time-cards turned in by the machinists reporting the work done on that tee, the last card turned in bears the date February 27, 1911. That would be the date the tee was completed.
- Q. And it is your present recollection that that enlarged slotted tee was completed on February 27? Is that correct?—1911?
 - A. That is what the records show.
- Q. You testified in the interference in the United States Patent Office, No. 37,126, did you?
 - A. Yes, sir. [143—85]
- Q. And you testified that this work referred to was done under the supervision of the foreman, Mr. Knapp? A. Yes, sir.

Mr. BLAKESLEE.—We ask that the witness be confronted with his testimony without any conclusions being placed upon it in advance.

Q. (By Mr. LYON.) You heard Mr. Knapp's testimony in that case, that this special tee was not finished until March 8, 1911, didn't you?

Mr. BLAKESLEE.—The same objection.

The COURT.—I think that is a pertinent question.

Mr. BLAKESLEE.—The witness is entitled to be confronted with his testimony without any conclusion being placed on it.

- A. I don't remember the testimony in that regard.
- Q. (By Mr. LYON.) Please tell us when reamer No. 120 was completed and first assembled in its revised form with this single-piece key.
- A. The work was completed on the reamer ready for assembling on February 27, 1911.
- Q. You were asked on your direct examination in said interference preceding the following question and gave the following answer, were you "Q.—126 From your own knowledge, as near as you can give it, when was this work completed on this shop order No. 6904? A. That order was completed on April 14. That is, the last cards turned in on that order bear the date April 14, and they are blacksmith work and blacksmith helper work."?

A. That is the day the reamer was tempered, but that didn't prevent it being in position to assemble.

- Q. You gave that testimony that I have read?
- A. The last card is for tempering—

The COURT.—Answer the question, whether you testified as he read it. [144—86]

A. I think I did.

- Q. (By Mr. LYON.) And you were asked in that same matter the following question and gave the following answer, did you: "Q.—Now, I notice that this drawing bearing the date 4-22-11, and that shop order 6904 of the 'Wilson Exhibit, February, 1911, Wilson & Willard Manufacturing Company Shop Record Slips' bears the date 4-22-11. Is there any significance in such datings? A. In accordance with my instructions to the foreman and my instructions to the foreman of the blacksmith-shop as well, and, in fact, all foremen that we ever had, when they complete an order they are to note thereon the date that the order is O.K.'d by them and turned in to the office. In other words, the day they are finally done and through with the work. And that is the notation on this order No. 6904, and also the notation in the red pencil of 4-22-11 on the drawing of this tee and key. That is the date on which our foreman, Mr. Knapp, completed the order and checked it over and delivered it into the office." Did you give that testimony? A. Yes, sir.
- Q. Are you prepared to state of your own recollection and knowledge that this reamer 120 was assembled in your shop at any time prior to March 8, 1911, with the single-piece key device therein?
 - A. Yes, sir.
- Q. On what date was it so assembled with the single-piece key device mounted therein?
- A. We assembled the reamer the very moment we got the parts completed. We were anxious to see it assembled.

- Q. Was the slotted tee complete at that time?
- A. Yes, sir.
- Q. When was it that this man Houriet first put this slotted tee-bar into that reamer No. 120?
 - A. I don't remember. [145—87]
- Q. And when was it that he first inserted the onepiece key in place in such enlarged slotted tee-bar in reamer No. 120%
- A. I don't remember whether he was the first man who assembled the reamer or not.
- Q. When was it that he made this discovery, as you have referred to, that the key could be pried up with the tang or sharp end of a file?
 - A. Sometime after February 27, 1911.
 - Q. How long?
- A. Probably—that would be a guess; I couldn't tell you how long.
 - Q. Was it prior to March 8, 1911?
 - A. I don't know.
- Q. Will you state positively that it was not after March 8, 1911, that he made this discovery?
- A. I don't remember the date that he made the discovery.
- Q. To whom did you exhibit this under-reamer No. 120 with this enlarged slotted tee-bar mounted therein and the single-piece key in place holding the spring and tee-bar in place in the reamer, prior to March 8, 1911?
 - A. I suppose every man in our shop saw it.
- Mr. LYON.—I move to strike the answer from the record as not responsive to the question and a mere

(Testimony of E. C. Wilson.) conclusion of the witness.

The COURT.—The motion is granted. Read the question to the witness.

(Question is read.)

- A. I don't recall who it was or who they were.
- Q. (By Mr. LYON.) Will you state positively that prior to March 8, 1911, it was so assembled in the shop of the Wilson & Willard Manufacturing Company at any time? A. Yes, sir. [146—88]
- Q. On what day? I don't know what the witness is doing, but I am asking him. He pretended to be able to answer without referring to other papers, and I would prefer very much to have his recollection first independent of any reference to anything that is not in evidence.
- A. We assembled them the day the materials were completed ready for assemblying.
 - Q. You say "we." Who did that?
 - A. The machinists in the shop.
 - Q. Who were the machinists that did that?
 - A. I don't remember.
 - Q. Were you present? A. Yes, sir.
 - Q. What time of the day was it?
 - A. I don't remember.
- Q. Was it prior to March 1, 1911, that that was so assembled? A. Yes, sir.
- Q. Who saw the reamer besides yourself on that day? Name a single person? A. Mr. Knapp.
- Q. And this slotted tee-bar—the enlarged slotted tee-bar was in the reamer at that time?
 - A. Yes, sir.

- Q. How did you remove the key the first time the reamer was assembled with the single-piece key therein? A. With a lever.
 - Q. Explain to us how.
- A. The key was so designed by having a notch at either end in the lower edge, that when a certain shaped lever was placed underneath the key it could be pried upwardly and outwardly.
- Q. And for how long did you use that lever before Mr. Houriet made this discovery that the tang end of a file could be used to [147—89] pry the end up?
 - A. I have stated that I don't remember.
 - Q. What is your best recollection?
 - A. I should say it had been two or three weeks.
 - Q. It might have been four weeks?
 - A. I couldn't say as to that.
- Q. What time of the day was it that you called this conference together of Mr. C. E. Wilcox, Arthur G. Willard, W. W. Wilson, your brother, and Mr. Knapp and Mr. Robert E. Bole, one of the complainants?

Mr. BLAKESLEE.—We object to that as immaterial. It is a matter of over four years ago, and the exact time of the day is not material.

The COURT.—I will take the testimony. The objection is overruled.

- A. It was in the afternoon.
- Q. (By Mr. LYON.) And where was this conference called?
 - A. In the rear of our machine shop.
 - Q. And how was such conference called?

- A. By word of mouth.
- Q. Did you ask each one of these men to meet you there? A. I don't believe I did.
- Q. What do you mean then that you called a conference?
- A. We conferred in regard to the key and discussed the matter.
- Q. Then it was an accidental meeting rather than a called conference? Is that the idea which you now wish to convey?
- A. Yes, sir; I did not appoint any specific time that we were to meet.
- Q. Did you not in your testimony in the interference proceeding to which I have already referred, testify "I called together some of the boys in the shop—some of our men—among whom was W. W. Wilson, A. G. Willard, C. E. Wilcox and R. E. Bole, to get their [148—90] opinion as to which was the better type of a key"? A. That is right.
- Q. When was it that you called these men together? A. At the time of the meeting.
 - Q. And when was that?
- A. That was one afternoon sometime; I should say February 1, 2 or 3, of the year 1911.
- Q. And you fix that date solely by the fact that it was after the receipt of this Williams letter which has been offered in evidence which was received by you on January 30, 1911? A. Not altogether.
 - Q. By what other circumstance?
- A. Immediately after that conference I dictated an order which was for the purpose of changing over

reamer No. 120 to the new slotted tee type.

- Q. Was that order dictated the same day as this conference?
 - A. I am not sure as to that.
- Q. Do you remember what your testimony in the interference case was in regard to that fact?
 - A. No; I do not remember.
- Q. And you mean to testify that prior to that conference you never had had any talk whatever with Robert E. Bole, Charles E. Wilcox, W. W. Wilson, A. G. Willard or Mr. Knapp in regard to this single piece key? Is that correct?

Mr. BLAKESLEE.—Objected to as placing an arbitrary interpretation on the testimony of the witness. Let him testify without putting the words into his mouth.

The COURT.—He has a right to ask leading questions of a witness on cross-examination.

- A. No, sir; I do not wish to testify that way.
- Q. (By Mr. LYON.) With which one of these men had you conversed prior to that conference or alleged conference in regard to this [149—91] single-piece key device?
- A. There is a bare possibility that I conversed with W. W. Wilson and A. G. Willard prior to that meeting.
- Q. Now, barring the bare possibility, have you any recollection so that you will state positively that you did or did not talk with either one or both of the men mentioned by you, W. W. Wilson or A. G. Wil-

lard, regarding that subject-matter, prior to that alleged conference?

- A. As to A. G. Willard, I think I will testify positively that I did not. I possibly did with W. W. Wilson.
- Q. Now, you say "possibly." What is your present recollection? Did you or did you not discuss that with your brother W. W. Wilson prior to that alleged conference?
- A. I will not say positively whether I did or did not.
- Q. What portion of the shop of the Wilson & Willard Manufacturing Company did this alleged conference take place in?
- Mr. BLAKESLEE.—Objected to as having already been testified to by the witness and merely repetitious.

The COURT.—It is repetition.

Mr. LYONS.—He says it was in the shop. I ask what portion of it. He says simply in the rear.

- A. I testified that it was in the rear of the shop.
- Q. What portion of the rear of the shop? I want to know where it was.
 - A. It was near one of our shapers.
- Q. Tell us where that shaper was located in the shop.
- A. The reamer was lying on the floor near the shaper in the rear end of our shop.
 - Q. Which side of the shop was that?
 - A. About the center of the building.
 - Q. And towards which side of the building were

you and these other gentlemen standing at the time that you started this [150—92] conference?

- A. Oh, I don't remember that.
- Q. You won't pretend to tell us?
- A. I know that we were talking over this underreamer that was lying on the floor near this shaper. I don't remember whether I was facing east or west.
 - Q. Who was present when that talk started?
- A. Mr. Arthur G. Willard, Mr. Robert E. Bole and I believe Mr. Knapp and Mr. W. W. Wilson.
- Q. When you say you believe, do you believe that W. W. Wilson was present at the start of such alleged conference, or do you want to state positively that he was there at the commencement of that conference?
- A. I won't state positively that he was there at the commencement. I don't remember.
 - Q. And where was Mr. C. E. Wilcox at that time?
- A. I believe he was in the party at the conference sooner or later, but whether he was there in the beginning of the conference, I don't remember. I believe he was there.
- Q. Did you invite him to take part in that conference?
- A. I don't remember whether I invited him to or not. I think if I remember rightly he came up after we had been discussing the matter a little while and I asked him about it.
- Q. Did he make any remark of any kind during that alleged conference?
 - A. I don't remember whether he did or not.

- Q. About what time was it that your brother W. W. Wilson appeared during that conference?
 - A. I don't know what time of the conference.
- Q. How far from the place of the conference was the shipper's desk or shipping desk?
- A. The shipper's desk was probably 15 or 20 feet away. [151—93]
 - Q. In what direction?
 - A. Still further toward the rear end of the shop.
- Q. And how far from the shipping door was that desk?
 - A. About three feet; two or three feet.
- Q. And still further away from where this underreamer was? Is that correct? A. No, sir.
 - Q. Was it closer than the shipper's desk?
- A. The door was probably closer to where we stood than the desk; yes, sir.
- Q. You were still further to the rear of the shop than the shipper's desk? Is that it?
- A. The door is more directly on a line from where we stood to the end of the desk than the shipper's desk.
- Q. At what time during that conference were you, A. G. Willard and Robert E. Bole at the shipper's desk?
 - A. Probably the latter part of the conference.
- Q. You were not there before going over to the under-reamer? A. I don't remember.
- Q. Prior to the conference taking place, at which you took part, A. G. Willard took part, Robert E. Bole took part, your brother W. W. Wilson took

part, and you think C. E. Wilcox took part, and Knapp, you think was present,—prior to that conference at this under-reamer were you with Robert E. Bole and A. G. Willard at this shipping desk discussing and making sketches?

- A. Prior to the conversation?
- Q. Prior to the conversation that you have referred to. A. No, sir.
- Q. You heard the testimony given by C. E. Wilcox in the interference proceeding or read it, did you?
 - A. I heard part of it if not all, yes, sir.
- Q. You heard his testimony that you and Mr. Bole and Mr. Willard [152—94] were huddled over this shipping desk and that you and Bole had pencils in your hands and were making sketches, did you? A. I heard that testimony, yes, sir.
- Q. And that you stepped back from the desk with a sketch in your hand, and said, "I see how you can get it in there, but I don't see how to get it out," and Robert Bole replied, "Why, pry it out." You heard that testimony?
- A. I don't remember whether those were the exact words or not. I know there was something of that character testified to.
- Q. What have you to say with regard to Mr. Wilcox's testimony that you and Mr. Willard and Mr. Bole were sketching or making sketches at this desk and that you and Bole each had pencils in your hand and that you stepped back and made the remark about the single-piece key and that you saw how it

could be gotten in but you could not see how it could be gotten out, and Robert E. Bole spoke up and said, "Why, pry it out," or words to that effect?

Mr. BLAKESLEE.—We object to this unless the witness is shown the testimony. The witness is not being interrogated as to his testimony, but as to the testimony which counsel is testifying to and in another proceeding. Counsel is purporting to tell this witness something about another proceeding.

Mr. LYON.—I am only asking what he has got to say in regard to the fact.

The COURT.—I don't know whether the rule in regard to a witness being shown his own testimony has the same relation to the testimony written out of other witnesses. The rule is that a witness, if he is interrogated about a writing, should be shown the writing. Now, I don't know, but I presume the way you gentlemen are talking, this evidence was put in writing.

Mr. BLAKESLEE.—It has not been shown that this witness was present when the witness testified. The testimony has been reduced to writing, and it simply amounts to counsel pretending to [153—95] repeat something which the witness may know nothing about.

Mr. LYON.—We will avoid all this controversy and save time. Modify the question to read, "If Mr. Wilcox so testified, or testified in this case, what have you to say in regard to the truth or falsity of such testimony?"

The COURT.—I will sustain an objection to that

question. You have no right to ask this witness that.

Mr. LYON.—I withdraw the whole proposition. It is not of enough consequence to follow up lengthily.

Q. Were you, Mr. Bole and Mr. A. G. Willard at that shipper's desk prior to turning to the underreamer and prior to your making the remark with a sketch in you hand, that you saw how the single-piece key could be gotten into the reamer, but did not see how it could be gotten out, or words to that effect, and Robert Bole spoke up and said, "Pry it out"?

Mr. BLAKESLEE.—Objected to as indefinite. We don't know what counsel means by "prior to turning to the under-reamer."

The COURT.—I will overrule the objection.

- A. I think not.
- Q. (By Mr. LYON.) Are you prepared to state positively that you were not there?
- A. I am prepared to state positively that the first time I said that I did not see how I could pry it out was before we went to the table, before we went to the desk.
 - Q. How many days before that was that?
- A. It was immediately after I showed them the sketches which I had made.
- Q. Then you showed Mr. Bole, W. W. Wilson and Knapp and C. E. Wilcox the sketches before you went to the shipper's desk, did you?
- A. Before I showed the sketches I had in my pocket.

- Q. Please answer the question. [154—96]
- A. I won't say positively that all those gentlemen were there.
- Q. Which gentlemen were there prior to your going to that shipper's desk?
- A. I have testified to the best of my knowledge before as to that.
- Q. No, you have not. I want you to tell me now clearly who was there prior to the time that you, Bole and Willard went to this shipper's desk and made sketches of this single-piece key device for an under-reamer.
- A. I don't believe any sketches were made at that desk.
 - Q. What did you go to the desk for?
- A. I don't remember. We just loitered over there. I don't remember any particular reason for going over there.
- Q. To whom did you show any sketch or sketches prior to going to that desk, and when I say "sketch," I am, of course, limiting it to a sketch of this one-piece key device?
- A. Mr. Bole was there, Mr. Willard, I believe, and, if my recollection serves me well, W. W. Wilson and possibly Mr. Wilcox and Mr. Knapp. I don't remember whether they were there at the first or not.
- Q. Now, let us see again if we can find out what you are willing to testify to. Prior to going to that shipper's desk in company with A. G. Willard and R. E. Bole you said that you showed to some of these men some sketches of this single-piece key device.

- A. Yes, sir.
- Q. Now, then, did you show those sketches to Robert E. Bole prior to going to that desk?
 - A. I certainly did. He was there.
- Q. Who was present at the time you showed the sketches to Robert E. Bole prior to going to the shipper's desk?
- A. I will try to tell you again that I believe it was [155—97] W. W. Wilson, Mr. Willard and possibly Mr. Knapp. It is my recollection he was there. Possibly not until later.
- Q. Will you state positively that any one of the men that you have named was there?
 - A. Yes, sir; there was somebody there.
 - Q. Who was?
- A. Mr. Willard and Mr. Knapp—I should say, Mr. Willard, Mr. Bole, and I believe W. W. Wilson. I am fairly positive of that.
- Q. That was prior to the three of you—A. G. Willard, Robert E. Bole and yourself—going over to the shipper's desk that afternoon, was it?
- A. I know that was the first thing I did—was to call their attention to the change in this key and tee that I was going to make, and I showed them these sketches which I had been working on for several days.
- Q. Just prior to doing that, as you say, where were you?
- A. Somewhere in the shop. I don't remember where I was.

(Adjourned until 2 o'clock P. M.) [156—98]

Wednesday, March 24th, 1915, 2:00 o'clock P. M.

E. C. WILSON, recalled, cross-examination resumed:

(By Mr. LYON.)

Q. Please explain to us, Mr. Wilson, just how you happened to get these men, C. E. Wilcox, W. W. Wilson, A. G. Willard, Robert E. Bole, and W. G. Knapp together in the back of the shop of the Wilson & Willard Manufacturing Company for this conference which you say you called. Tell us what you were about to do, who you took out there first, and so forth.

A. I had made up my mind that I could, by changing the shape and proportions of that tee, overcome the breakages which had occurred when I had previously used it, and I made up my mind that it would be advisable to change back with a slotted-tee type of reamers by reason of that improvement. At that time I thought it well to reconsider the design of the key, which design or two-piece key I had adopted in 1906 or '7, and, if possible, overcome the minor trouble that that key had caused. My mind again reverted to the different designs which I had considered in 1906 or '7. I again made sketches of them and studied their relative merits and tried to determine in my own mind whether they would be a success and an improvement over the double-piece key type. I was not altogether certain in my own mind as to which would be the better type, or as to whether they would be an improvement over the two-piece key, believing that there would be some

trouble to remove one of the types which I had designed, namely, the type which I later adopted. I had these sketches in my pocket, as has always been a habit of mine; when I think of an article or a thing I am trying to invent I make a little sketch of it, work it out on paper first. And these sketches I had, and had been studying over for three or four days; and I [157—99] finally concluded to ask the opinion of these different men I had in the shop and whose judgment on those things is fairly good.

- Q. Well, proceed and answer the question. I ask you what you did. Tell us how it occurred you got these men together—as you say, called them into conference. Where did you get them, and so forth?
- A. They were in the shop of the Wilson & Willard Manufacturing Company.
- Q. And where was Mr. A. G. Willard at the time you went out into the shop?
 - A. He was in the shop, also.
- Q. In the shop portion of the shop, or in the office? Did you take him with you for this conference, or where did you get him? I want you to tell us about how you called this conference together.
- A. I don't remember whether I called him out of the office or whether I met him out in the shop, or where I got him; but, at any rate, we gathered together around this eight inch under-reamer that was lying on the floor.
- Q. Well, where did you find Mr. Bole? Did you call him from the pump department, or from the office, or what?

- A. He might have been with Mr. Willard, or Knapp, or some of the other men; I don't know. I don't remember how I announced it to get them together, or how it happened; but we were all together around this reamer.
- Q. Then, if I am correct, you now testify that you have no recollection as to how you got the men together at that time? Is that it?

Mr. BLAKESLEE.—We object to this as immaterial, as long as the parties were gotten together in the shop and talked to, or came together. [158—100]

The COURT.—I think this is a matter of testing his memory. His memory may not be of very much consequence, but we might see what memory he has on the subject.

- A. I can't testify definitely whether they were any of them together when I first commenced to converse about this to get them together or not, or whether they were standing around separately, or how it was.
- Q. (By Mr. LYON.) Well, how long had you been talking with Mr. A. G. Willard and Mr. Robert E. Bole about this single-piece key device and sketches before your brother W. W. Wilson joined you at that time?
- A. I should say it was only a short time; probably only a few minutes.
 - Q. Not over two minutes?
 - A. No; it might have been longer than that.
- Q. You had had some conversation, then, with Bole about this before W. W. Wilson came up? Is that it?

A. I am not altogether certain that he was not present from the beginning.

Q. Well, what is your recollection?

Mr. BLAKESLEE.—The witness has testified, it seems to me, as to what he knows.

The COURT.—I think, Mr. Blakeslee, he has a right to ask that question. This seems to be a very important circumstance in this case, and it seems to me that we are entitled to all the memory the witness has on the subject, and to test out his memory.

Mr. BLAKESLEE.—We don't object to that, but he has testified, it seems to me, two or three times as to this.

The COURT.—I overrule your objection.

A. It seems to me that I left the office in company with either Mr. Willard, or Mr. Wilson possibly, and went into the shop, or had been in the shop, together, talking with him near the [159—101] office. I don't remember. At any rate, I believe I was in the company of one or the other of those gentlemen—possibly Mr. Bole was with us at the time we walked back to the shop and I announced this intention of mine to change this reamer.

Q. (By Mr. LYON.) Now, please tell us the whole of the conversation that you had at this alleged conference on February 1st, 2d or 3d, 1911, in the presence of Robert E. Bole?

A. I would not be able to tell you the whole conversation. I might tell you the substance of it.

Q. Well, tell us all that you remember of it, giving the words of the conversation as nearly as you

(Testimony of E. C. Wilson.) can and now recollect them?

A. The idea of changing this under-reamer over had been on my mind several days, and I just commenced to discuss this change which I had in mind with these boys, and told them that I had determined from my drawings and sketches which I had made, laying the size of this tee off the full size, that I could overcome the faults and shortcomings of the oldstyle slotted tee, and that this order for the twelve and a half inch tee received from the Pacific Iron Works at McKittrick had again caused me to reconsider the merits of that style of under-reamer. I was convinced from my observations that the slotted tee was the better type of reamer, and that it could be strengthened and made to overcome the other faults. "Now," I said, "with that point settled in my mind I have determined to change the style of key, if possible, and make another key which would be an improvement over the double-piece key; but I am not certain as to whether that is possible or not. I have made sketches and have been studying on the thing for several days, and I have different designs and ideas here which I would like to have your opinion on." I showed them these little sketches which I had in my pocket. I am not sure whether -I imagine they were on single pieces of paper. At any rate, [160—102] I showed them those sketches at the time and asked their opinion. When I told them that it would be necessary to have two screw plugs to hold it in place—one of which plugs would remain permanently in the reamer, but the other

plug would have to be removed each time the key was removed. Another style of key of the one-piece type would also require the use of a plug to hold it in place. And then I showed them another key which I had which would overcome the use of the plug altogether; but I said, "The trouble with this key is I am afraid it will cause trouble to remove. I can see very well how it will be placed in the reamer, but it will be hard to take out; I am afraid we will have trouble to remove it, and possibly that will prevent its being adopted or used by the oil men." And at that moment, the boys all looking at this sketch, and I holding it in my hand, Mr. Bole said, "Why, pry it out." I said, "Yes, pry it out, of course, but how will we pry it out so that it will be convenient enough that it will be adopted?" And he said, "I can design a tool which will pry it out." "Well," I said, "I think I can design a tool which would pry it out, but I think even then it will give us considerable trouble to remove."

Q. That is all of the conversation you remember, is it?

A. That was the sum of the conversation; yes, sir. I might add that I had the opinion of the men at that time that a key which dispensed with the use of the plug would be the better type of key if we could remove it with sufficient ease to be adopted; and I don't know, but it seems to me one of the boys said, "Well, it is worth trying, anyway." And I said, "I think it is." And I think that is about the sum and substance of the conversation.

- Q. Did you, in that conversation, at the end of it, tell them that you were going to try it out immediately?
- A. I probably said, "I believe I will give it a trial."
- Q. You won't be positive as to that, then? [161—103]
- A. I know, at any rate, the order was made up for the reamer very shortly afterwards.
- Q. Now, then, in Interference 37,126 you were a witness on your own behalf, and testified as follows: "I had one key which I knew how to make and put in place, and which would overcome the use of the plug, which was one of the chief objections that I was aiming to avoid in designing this key, but I did not know how to take the key out. When I showed them that key and called attention to the fact that it would hold itself in place by means of the tension of the spring, and could not work out at either end of the key slot, I said, 'The trouble with this key is I can't take it out. I don't know how to take it out.' And at that juncture, R. E. Bole said, 'Simply pry it out. Pry it out at one end.' I said, 'That is all very well'-we would have to pry it out, 'but I do not think we have room enough to pry it out.' He said, 'Yes, you can; you can pry it up at one end.' I said, 'Possibly so, but some tool would have to be devised to do it.' He said, 'I can devise a tool that will pry it out.' "You gave that testimony, did you?

Mr. BLAKESLEE.—We object to that question as indefinite and incomplete. Counsel has referred

to some interference, and given what purports to be the number of it. Now, it seems to me he should tell this witness what that proceeding was. Counsel is apparently dodging the question that there has been an interference of some sort. We would like to have him state what the interference was.

The COURT.—You have already told that there was an interference. Was this testimony he gave at some other time?

Q. (By Mr. LYON.) The testimony I refer to, Mr. Wilson, is your answer to question 62, asked you on direct examination, at about two o'clock or right after the opening of the session on the afternoon of May 28th, 1914; and I will show you the transcript [162—104] of such evidence if you wish to look at it.

Mr. BLAKESLEE.—I think it is fair to state whether or not it is the Interference.

The COURT.—The question is whether or not he testified that way at any time.

- A. Yes, sir; I so testified.
- Q. (By Mr. LYON.) Was that testimony true, to the best of your knowledge at that time?
- A. It does not seem to convey altogether the right idea. I probably could have used language that would have conveyed my idea better—the thought I had in mind.
- Q. Now, you say that when you got this order for the twelve and a half inch slotted tee from Mr. Williams it brought your mind back to the old two-piece key type of under-reamer. When did you com-

mence to lay out the drawings of an enlarged tee?

- A. On the day I received that order.
- Q. On the 26th day of February, 1911?
- A. January.
- Q. January, 1911. And you consulted with and worked with your brother, W. W. Wilson, on that day and on the following day, in connection with that enlarged slotted tee drawing, did you?

A. Yes, sir.

The COURT.—What date was that?

Mr. LYON—January 26th and January 27th, 1911—about a week before this alleged conference.

Q. And you say you had had the idea of this onepiece key ever since 1896 or '97, when you first used the two-piece key? Is that correct? A. Yes, sir.

Mr. BLAKESLEE.—Objected to as misleading—1896 and 1897.

Mr. LYON.—1906. The witness understands.

- Q. You said nothing to your brother W. W. Wilson on either [163—105] January 26th or 27th, 1911, when you and he were working on this drawing of the enlarged slotted key for this reamer, did you?
 - A. I won't say that I did not.
 - Q. Will you say that you did?
- A. Why, I probably did as late as the next day after January 26th, which would be the 27th. I have stated that I determined in my mind that day, on the 26th, that I could overcome the tee trouble.
- Q. Will you state positively that you discussed this single-piece key with your brother on either January 26th or 27th, 1911, and when I say "your

brother" I mean your brother W. W. Wilson?

- A. I won't state positively that I did, no. I probably did.
- Q. This key that you speak of, so far as the key is concerned, is an ordinary key of the type known as a gib, or gibkey, used in various kinds of machines with which you have been familiar since as early as 1900 or 1901? Is that correct?

Mr. BLAKESLEE.—Objected to as calling for a conclusion and not a statement of fact; not a description but a mere conclusion.

The COURT.—I think so. Objection sustained.

- Q. (By Mr. LYON.) How long, Mr. Wilson, prior to January 26, 1911, had you personally been familiar with the use, in any kind of a machine, of a gib or key like that which is now used in Defendants' Exhibit 1, which I now show you?
- A. I don't believe I ever saw a key of that design prior to that time.
- Q. In what respect does this key differ from the others that you had seen prior to that time?

Mr. BLAKESLEE.—Objected to as indefinite. It does not call for a definite comparison with any prior device. Merely an indefinite suggestion that there may have been some prior thing, without defining it.

The COURT.—I will overrule the objection. [164—106]

A. I had used keys in the manufacture of the patented spear which I invented in 1901 or '2, I believe; and I had used keys in the manufacture of this un-

der-reamer which was first made in 1904.

- Q. (By Mr. LYON.) And those spears that you refer to were casing-spears for use in oil wells?
 - A. Yes, sir.
- Q. And the object of such key was an assembling device to permit the operative parts of the tool to be taken from the body and mounted on the body of the tool?

Mr. BLAKESLEE.—Objected to as immaterial, inasmuch as the keys were not the same as those concerned here.

The COURT.—I think that is going too far, Mr. Lyon. Can't you ask him a leading question concerning these matters to get at what you want without going into the history of all this key business?

Mr. LYON.—The only thing I want to show the Court, if your Honor please, is this—as I will before I get through—that substantially the same key had been used in tools with which he is familiar, and to show—

The COURT.—Well, go at it directly.

Q. (By Mr. LYON.) The key in the Wilson casing-spear that you refer to differed from this key of Defendants' Exhibit 1 simply in the inclined top surfaces, to which I now point, the top of the key referred to in the casing-spear being spread instead of doubled at these points. Is that correct?

A. No.

Mr. BLAKESLEE.—Objected to as indefinite.

- A. Your statement is not correct.
- Q. (By Mr. LYON.) Then explain that key of the

Wilson casing-spear.

- Q. (By the COURT.) (Interrupting.) In what respect does this key [165—107] differ from any prior key you had ever seen?
- A. The keys that are commonly known as a gibkey, instead of having a shoulder, have a recess, or angular recess, which is the opposite from this shoulder, and it drops down and drops down on to a rod, as a rule, and prevents it moving in or out of a rod or bar; and it is generally held in there—
- Q. (By the COURT.) Have they got that top corner angled?
 - A. No; as a rule those are always flat.
 - Q. Straight? A. Straight.
- Q. (By Mr. LYON.) You mean that in the Wilson casing-spear you used the recess gib that you have referred to?

A. Yes.

Mr. BLAKESLEE.—We object to that as incompetent, irrelevant and immaterial, for the reason that this patent, and each of its claims, is for a combination including the key, and is not for the key itself. The cutters of the reamer were old.

The COURT.—There is no question before the Court now. Proceed, Mr. Lyon.

- Q. (By Mr. LYON.) What difficulties in removing the dips, or in removing the dips and spring-actuated rod and spring did you encounter in the use of the Wilson under-reamer of the block and screw type?
 - A. I don't know that we experienced any particu-

lar difficulties in removing them. It was sometimes a little hard to pry the block up against the tension springs to insert the screws; but it requires about as much work to put this key in as it did the block and screw.

Q. In Interference Number 37,126, question 41, your answer to that question was as follows. I will read the question first: "My question asked when you first evolved or conceived of such a one-piece key modification. What have you to say as to that? [166—108]

A. I think it was in January, 1911, that we received a telegraphic order—I believe it was a telegraphic order—from Mr. Williams of the Pacific Iron Works of McKittrick for a 121/2-inch slotted tee for Wilson under-reamer. At that time we had been having considerable trouble with the screws in connection with our block-and-screw type, as we called it, and which I have previously described. The screws would stick in the reamer body and give us considerable difficulty to remove them, sometimes necessitating the operator sending the reamer to the shop to have them drilled out, and when we had been getting these reports my mind again reverted to the key type of under-reamer. had been thinking about it for some time and had been making inquiries of different parties as to their opinion of the Wilson under-reamer of the blockand-screw type. And when this order came in for the slotted-tee type of under-reamer it impressed me very much as surprising that one of those reamers

was still in use. I had supposed they were all out of use. And that afternoon I remember of studying the thing over and I concluded to take the matter up with Mr. Williams, who had ordered this tee, and learn his personal opinion as to the relative merits of our block and screw type of under-reamer as compared with the slotted-tee type with the double key. I wrote him a letter that day on which we received this order. I think that was January 25, 1911. I asked him—

A. As I stated, I wrote immediately a letter on that date asking his opinion on those points. His reply convinced me that I had not worked out the full possibilities of the slotted-tee type of underreamer, and I set about at once to determine how strong that tee could be made, and, if possible, to overcome the difficulty had with the double-key type. The double-key type of under-reamer had not been thoroughly satisfactory for the reason that the keys, being on a taper, had a tendency to drive the [167—109] upper one outwardly from the plug by which it was retained in position, damaging the threads and making it difficult to remove the plugs." You gave that testimony, did you?

A. Yes, sir.

Q. And the statements therein which I have read were true?

A. With one exception, I think. I believe that testimony reads that after receiving that letter I commenced the work of making that on that type. It was immediately after receiving the order of January 27th.

- Q. The statements, however, as far as the difficulties of removing the block and screw type and the double-key type—and when I say "removing" I mean dismantling—contained in that answer, were true, were they?
- A. Yes, so far as removing is concerned. But you spoke of assembling, a while ago.
- Q. Now, isn't it a fact that the double-key type of under-reamer, when in use in under-reaming—in other words, when the device was assembled—was found thoroughly satisfactory in use and there was no difficulty with the double key while in the act of under-reaming?
- A. The double key itself worked all right; when it was in a hold it performed its service all right, when in active use.
- Q. And the only difficulty with the double-key type, so far as the double key is concerned, was the wedging out of the top part of the tee, as stated in the answer I have read you, and the necessity, often, to drill up the screw key and dismantle the reamer; is that correct?
- A. Not altogether. I think the trouble is inclined to be the carelessness of the drillers. They didn't keep it properly lubricated. [168—110]
 - Q. They had trouble with that key, however?
 - A. Yes, sir.
- Q. And the reason you wanted to adopt a singlepiece key was because it was more readily removed, and the bits more readily taken off? Is that correct?

- A. I thought it would give better service; yes.
- Q. You have referred to Mr. A. G. Willard in your testimony. Mr. A. G. Willard owned substantially one-half of the stock in the Wilson & Willard Manufacturing Company, and you owned substantially the other half of the stock, and all of the stock was held between you and A. G. Willard except two or three shares that were in the name of Mr. Willard's wife, at all times from the incorporation of the Wilson & Willard Manufacturing Company up to 1913? Is that correct?

Mr. BLAKESLEE.—Object to that as immaterial to prove any of the issues, or disprove anything.

The COURT.—It is only for the purpose of showing his interest. I don't know whether it is appropriate to show Mrs. Willard's interest in this thing or not.

Mr. BLAKESLEE.—That is what we object to.

The COURT.—Sustained.

Mr. LYON.—I want to show the connection of these parties and their interrelation, so that we can judge of the whole of this alleged conversation.

The COURT.—I will let it stay in until Mr. Willard comes on the stand. I presume he will testify.

- A. Yes, sir; that is correct, up to the time I bought his interest. I think that was 1913.
- Q. You were asked, in your examination in said interference, the following question: "Q. 500. Then I will again ask you, if it is in your testimony that prior to the receipt on January 30, 1911, of Wilson Exhibit Pacific Iron Works Letter of January 28,

[169—111] 1911, you had ever discussed with either your brother, W. W. Wilson, Charles E. Wilcox, Arthur G. Willard or Robert E. Bole, the use of the single-piece key in the Wilson reamer, for the purpose of mounting the tee bar or spring-actuated rod and spring in the Wilson under-reamer.

A. I think I discussed the advisability of making the change in my Wilson under-reamer with W. W. Wilson on the day that I received the order for the 12½-inch tee, which was January 26, 1911. I believe I had no discussion with Mr. Willard or Mr. Bole or Mr. Wilcox about that key, or about a single-piece key, immediately prior to the receipt of this letter. It is possible that I had referred to my suspicion that a single-piece key could be made that would be an improvement on the double-key type, but whether or not I discussed it prior to this date referred to, with these several gentlemen, I am not prepared to say. I don't remember." Did you give that testimony? A. Prior to January 30th?

Q. No. Just read the question, and let the witness look at the testimony.

Mr. BLAKESLEE.—Which are we to believe? Counsel says he so testified and then asks him if he did. Counsel admitted he so testified.

(Record shown to witness.)

A. Yes, sir. I so testified.

Q. (By Mr. LYON.) Again referring to your testimony in said interference, was the following question asked and answer given by you: "And according to your best recollection you did not discuss

with W. W. Wilson at any time prior to this conference which we have identified, such one-piece key device of the Wilson under-reamer?

- A. I do not remember definitely—I don't know that I remember at all having discussed with him at all prior to that time." Did you so testify? [170— 1127
- A. Yes, sir. And that is uncertain in my mind still. It was my opinion that I did, but I can't swear definitely that I did.
 - Q. Well, did you give the testimony that I read?
 - A. Yes; I testified that way.
- Q. I show you a copy of letters patent of the United States numbered 827,595, patented July 31, 1906, to Elihu C. Wilson, of Bakersfield, California, for under-reamer, and ask you if you are the Elihu C. Wilson named therein? A. I am.
- Q. And that is a copy of the patent under which you manufacture these Wilson under-reamers?

Mr. BLAKESLEE.—Objected to as calling for a conclusion. The witness can state what he manufactures, but whether or not it embodies all of that invention calls for a conclusion.

Mr. LYON.—I ask him if that is the patent that he claims to be manufacturing under.

Mr. BLAKESLEE.—The same thing.

The COURT.—I understand you to ask him if he is operating under that patent.

Mr. LYON.—That is it.

Mr. BLAKESLEE.—That calls for a conclusion.

The COURT.—The objection is overruled.

A. Yes, sir.

- Q. (By Mr. LYON.) You are still the owner and holder of said letters patent? A. Yes, sir.
- Q. And the Wilson & Willard Manufacturing Company have been at all times manufacturing under this letters patent, have you?

Mr. BLAKESLEE.—Same objection.

A. Yes, sir.

Mr. LYON.—We offer the Wilson patent referred to in evidence. [171—113] If the Court will permit, I will substitute another copy of it. This is bound in here.

Mr. BLAKESLEE.—Have you another copy?

Mr. LYON.—Not in the courtroom at the present minute.

Mr. BLAKESLEE.—That may be left in the meantime?

Mr. LYON.—Yes.

Mr. BLAKESLEE.—We have no objection. In fact, we invite its offer.

The COURT.—Well, you gentlemen can agree upon it and have it filed.

The CLERK.—That will be Complainant's Exhibit "B."

Mr. LYON.—That is all.

Redirect Examination.

(By Mr. BLAKESLEE.)

Q. Please state what was the history of reamer 120 between the time when it was first put together or assembled with the single-piece key, as you have testified, the latter part of February, 1911, and

April 22d, 1911, at which time you have testified it was completed.

A. Some little time after the reamer was finished, so far as the machine work was concerned, it was sent to the blacksmith-shop and was tampered, hardened. The reamer was in the blacksmith shop lying on two wooden horses, and we quite frequently displayed it to customers and other men who were interested in oil-well tools and who came to our shop. The reamer was taken apart and reassembled many times while it was there.

Q. And during this period of time, or interim, where was this reamer?

A. It was in our machine shop for a while, and then in the blacksmith shop.

Q. Was it sold prior to April 22, 1911? [172—114] A. No, sir.

Q. Now, you have testified with respect to the conference on or about February 3, 1911, and your being near a shaper in the machine shop,—at one time, and near the shipping, in the machine-shop—at another time, during the general period covered by your testimony as to that conference. How many times during that conference was the question of prying the key out of the reamer discussed?

Mr. LYON.—We object to that as leading and suggestive, assuming facts not testified to by the witness.

The COURT.—Let him tell what was said.

A. I contended that there would be difficulty in prying the key out of the reamer, and that was the

substance of the discussion. The key—as to its design, we agreed; but there was a difference of opinion among us as to whether or not the key could be removed with sufficient convenience to cause its adoption. I said, "I don't know whether we can pry the key out with sufficient ease."

The COURT.—Now, Mr. Blakeslee, that has been stated two or three times. What is your point?

Mr. BLAKESLEE.—My question, as to which the answer is not responsive, was as to how many times this discussion took place—whether it was repeated?

Q. (By the COURT.) Can't you state that, Mr. Wilson ?

A. Oh, that statement was probably repeated by me several times, because I still contended that there would probably be some trouble to remove the key. I said, "It is all right, the key is good, if we can remove it sufficiently conveniently for the men to find it satisfactory."

Q. (By Mr. BLAKESLEE.) And as to these several times of such discussion as to prying the key out, when did such several times occur, or when were such several times, with respect to the portion of the conference at which you were at the shipping desk, [173—115] and the portion of the time at which you were near the shaper?

Mr. LYON.—We object, on the ground that it is leading and suggestive, and assuming facts not testified to by the witness. The witness says that possibly he may have made these remarks more than once, but he has not positively stated that he did.

The COURT.—Objection sustained.

- Q. (By Mr. BLAKESLEE.)—Please state when and where, during this conference, any such talk of prying out the key of the reamer occurred?
- A. It occurred when I first presented the sketches to the men, at the time we were standing near the reamer 120 as it lay on the floor by this shaper, and probably was repeated several times while there. I don't know how many times it was repeated. Possibly while we were near the desk, or probably while we were walking away from the place, because that was the chief point that I had in mind and the one I wished to consult with these men about.
- Q. What have you to say with respect to the comparative cost of the single-piece reamer key and the two-piece reamer key with its screw plug?

Mr. LYON.—That is objected to as irrelevant and immaterial; not cross-examination.

The COURT.—I can't see the materialty of it.

Mr. BLAKESLEE.—Counsel has tried to make it appear that the only possible reason that this single-piece key was adopted was because they had trouble. This is directly responsive to their cross-examination. I am trying to show the relative cost. That enters largely into the question of the adoption of new devices. They tried to make it appear it was only because of certain trouble. I want to find out if there was something else.

The COURT.—Objection overruled. [174—116]

- A. The one-piece key is much cheaper to make.
- Q. (By Mr. BLAKESLEE.)—And how, also,

(Testimony of E. C. Wilson.)
comparatively, as between the single-piece key and

the block-and-screw type?

Mr. LYON.—Objected to as irrelevant and immaterial, not cross-examination.

The COURT.—Overruled.

- A. The key is cheaper than the block and the screw type. That is somewhat offset, though, by the additional expense of this tee. It costs more than the old style tee did.
- Q. (By Mr. BLAKESLEE.) And did these considerations enter, to any extent, into your decision to adopt the one-piece key?
- Mr. LYON.—Objected to as leading and suggestive, and not cross-examination.

The COURT.—I will overrule the objection.

- A. It did, when I first adopted the two-piece key type away back in 1906 or '7. That was one of the chief reasons I had in mind for considering a one-piece key at that time.
 - Q. (By the COURT.) When was that?

A. That was in 1906 or '7.

Mr. BLAKESLEE.—That is all.

Recross-examination.

(By Mr. LYON.)

Q. Now, Mr. Wilson, in this alleged conference of February 1, 2 or 3, 1911, when you say that possibly you made the remark several times during such conference—once near this under-reamer and possibly several times there, and over at the shipping desk—I suppose Mr. Bole each time made this remark, "Why, pry it out," then, did he?

A. I don't remember whether he made the remark each time or not. [175—117]

Redirect Examination.

(By Mr. BLAKESLEE.)

Q. Did Mr. Bole ever show you any tool for prying this reamer key out?

Mr. LYON.—We object to that on the ground it is not proper redirect examination, and as leading.

Mr. BLAKESLEE.—I think possibly it is not redirect. I ask, in that case, if I may recall the witness to ask that one question. It is material.

The COURT.—Objection overruled. Go ahead and answer it. A. No, sir.

Mr. BLAKESLEE.—That is all.

Recross-examination.

(By Mr. LYON.)

Q. You testified in the Interference suit that you saw Mr. Bole busy at the bench, you presumed working on his device, but that he had never shown it to you? Is that correct?

Mr. BLAKESLEE.—Objected to as placing an arbitrary interpretation upon the testimony without quoting it, if there be such.

The COURT.—Well, he is entitled to see the testimony, Mr. Lyon.

Mr. LYON.—If he requires it, I will show it to him, before he gets through.

The COURT.—That objection being made on that ground, it is sustained.

Q. (By Mr. LYON.) Changing the form of the question, Did you at any time during the work on

the first reamer embodying the one-piece key device, at the Wilson & Willard Manufacturing Company's shop, see Mr. Bole working on anything at the bench pertaining to such key-removing device? [176—118]

Mr. BLAKESLEE.—Objected to as calling for a conclusion.

The COURT.—Overruled

- A. I cannot state that he was working on a key device. I realized that he was busy about something, and it didn't make much of an impression on me at the time.
- Q. (By Mr. LYON.) You didn't pay much attention to what he was working on at that time?
 - A. I really paid no attention to it.
- Q. You couldn't say whether it was the key-removing device or one of the single-piece keys, could you?
- A. Not only by hearsay. I was told afterwards that that was what he was doing.

Mr. LYON.—That is all.

Redirect Examination.

(By Mr. BLAKESLEE.)

- Q. You were told afterwards he was doing what?
- A. That he had been working on a lever or some sort of a tool to pry that key out.
- Q. Were you told afterwards that he had been working on a single-piece key?
- A. No; only on a lever for prying out the single-piece key. [177—119]

[Testimony of William G. Knapp, for Defendants.]

WILLIAM G. KNAPP, called and sworn on behalf of defendants, being first duly sworn, testified as follows:

Direct Examination.

(By Mr. BLAKESLEE.)

- Q. Please state your full name, age, residence and occupation.
- A. William G. Knapp; age, thirty-seven; occupation, machinist; residence, 830 North Marguerita Avenue, Alhambra.
- Q. Were you ever employed by the Wilson & Willard Manufacturing Company, the defendant in this case? A. Yes, sir.
 - Q. During what period of time?
- A. From the year 1908 to 1914 and beginning of 1915.
 - Q. What was the nature of such employment?
- A. At first I worked as a machinist and later as foreman of the shop.
- Q. You are not connected with them at the present time, are you? A. No, sir.
- Q. What sort of articles or devices were manufactured there during your superintendence?
- A. Wilson under-reamers, Wilson casing spears, Wilson casing elevators, Bole pumps, Willard circulating heads.
- Q. I will ask you to please look at "Defendant's Exhibit No. 1," and ask you whether you ever have seen such a device before.

 A. Yes, sir.

Q. What is it?

Mr. LYON.—Objected to as immaterial.

The COURT.—I don't see that it is necessary, Mr. Blakeslee. I can't see why you should go through those merely formal matters with this witness.

Mr. BLAKESLEE.—It is simply to show that he manufactured them. [178—120]

The COURT.—I suppose that will be admitted. He worked in the shop when these things were manufactured.

- Q. (By Mr. BLAKESLEE.) When did you first see at that shop an under-reamer such as this exhibit, with the single-piece key device in it?
 - A. A complete reamer?
- Q. I mean a reamer with the parts assembled together with such a single-piece key.
- A. I think it was in the latter part of February or first of March.
 - Q. Of what year? A. 1911.
 - Q. (By the COURT.) Is that this reamer 120?

Mr. BLAKESLEE.—Yes, sir. That was reamer No. 120? A. Yes, sir.

- Q. Can you give the names of any persons who performed work on that reamer? A. Yes, sir.
 - Q. Please do so.
 - A. Mr. Wills, Mr. Rydgren, Mr. Bird, Mr. Houriet.
- Q. What sort of work or what nature of work did each of these parties do on that reamer?
- A. Mr. Wills did fitting work, I believe, and also Mr. Houriet; and Mr. Rydgren was the blacksmith

and forged the materials, and Mr. Bird was his helper.

- Q. How was it that reamer came to be made over in that shop to include such single-piece key?
- A. It was made over under instructions or caused by the instructions from Mr. E. C. Wilson to myself.
- Q. In what form did you receive those instructions?
- A. My first instructions were verbal, to the best of my knowledge. [179—121]
- Q. What was the nature of those verbal instructions?
- A. Mr. Wilson took me over to the side of the shop near a post where this reamer 120 was standing, and explained to me that he was going to try a 1-piece key in this reamer. And at that time he took a pencil and drew on the palm of his hand a sketch of this key.
- Q. Can you at this time produce or have you at any time heretofore produced or reproduced such a design as he drew upon his hand with a pencil at this time? A. I have.
- Q. Have you such reproduction of that design before you? A. Yes, sir.
 - Q. When did you make this outline sketch?
- A. According to the notation in the corner, June 23, 1914.
 - Q. How did you come to make it?
- A. I believe it was made at the request of your-self.
 - Q. Under what circumstances and where?

A. It was during an interference suit. I believe it was at your office that the proceedings were held.

Q. Between what parties?

Mr. LYON.—Objected to as irrelevant, immaterial and incompetent.

The COURT.—That is not necessary, that I see, if he made it at that time. It does not illustrate his testimony.

Q. (By Mr. BLAKESLEE.) What does that sketch show?

Mr. LYON.—Objected to as not the best evidence. The sketch is the best evidence.

The COURT.—He has testified that it was for the purpose of illustrating what Mr. Wilson drew on the palm of his hand. Is there anything different from that that you want to get?

Mr. BLAKESLEE.—I just wish him to repeat that it was made for that purpose at that time. [180—122]

The COURT.—There is no use having it repeated. He has already stated it.

Q. (By Mr. BLAKESLEE.) In what form did you receive any further instructions as to the making over of this reamer 120?

A. Later I received a shop order in the regular way from the office to proceed with the making over of this reamer.

- Q. In what form was that shop order?
- A. Typewritten form.
- Q. Do you know where that shop order is at the present time? A. No, sir.

Q. Please look among the exhibits and see if you can find it.

Mr. LYON.—Oh, hand it to him.

- Q. (By Mr. BLAKESLEE.) Look among the papers and see if you can find it.
 - A. Yes, sir. Order No. 6904.
 - Q. When did you first see this order?
 - A. February 3, 1911.
 - Q. And from whom did you directly receive it?
- A. I cannot recall whether Mr. Wilson handed it to me personally or whether it was laid on my desk. As a rule they were simply laid on my desk.
- Q. To what Mr. Wilson are you referring and have you referred heretofore?
 - A. Mr. E. C. Wilson.
 - Q. A defendant in this case? A. Yes, sir.
- Q. What was his connection with that business at that time?
- A. President of the company—of the Wilson & Willard Manufacturing Company.
- Q. Referring to these several sheets that you have in your hand and beginning with the lowermost one and treating them successively, please tell me anything you know about them. [181—123]
- A. The first sheet bearing the date February 3, 1911, order No. 6904—that is all wrong.
- Q. (By The COURT.) Don't that show for itself what it is?
- Mr. BLAKESLEE.—I think not. There are such things as initials on there which we think are his and various other identifying data, shop number.

A. The first is a material card. In other words, a slip which we used at the shop for turning in the different kinds of material which were used in the manufacture of different articles. There appears the date February 23, 1911, and is charged to order No. 6904, and calls for one piece of nickel steel weighing three pounds, which was used in the manufacture of a key and turned in by Fred Rydgren, the blacksmith, at that time.

Sheet No. 2 is order No. 6904 bearing the date of February 3, 1911, charging to the reamer account the time and material consumed in changing over 8-inch reamer No. 120. This order was later turned in to the office on March 22, 1911, by myself.

Sheet No. 3 is the shop order bearing the date February 18, 1911, order No. 7056, dictated by myself, charging to the reamer account labor and material to forge and machine one special 8-inch slotted tee and coil three special springs for same, to be used in the rebuilding of reamer No. 120. This order was turned in March 8, 1911, by myself.

The third slip is a sketch of the tee bar which was made for this reamer No. 120, and handed to me by Mr. Wilson and drawn by himself. It is all right to group these, isn't it?

Q. (By Mr. BLAKESLEE.) This is for the purpose of description—

The COURT.—Don't they show for themselves what they are?

Mr. BLAKESLEE.—Excepting his initials.

The COURT.—I think that is all that is necessary.

Have you initialed any of them?

A. Yes, sir; I think all of them. [182—124]

The COURT.—Has this been filed as an exhibit?

Mr. BLAKESLEE.—Not yet—simply for identification, to be offered after being fully identified.

Q. What does the placing of your initials on those slips signify?

A. It signifies that I charged to the reamer account or order No. 6904 for the labor performed on that order.

The COURT.—This is the document that I examined, isn't it?

Mr. BLAKESLEE.—Yes, sir; that is the document, and this is the sketch there.

Q. And when did you first see these slips, or any of them?

A. The first time I saw any of these slips was February 23, 1911.

Q. You are now speaking of the small slips attached to the large ones? A. Yes, sir.

Q. I now show you another batch of slips which bear, I think all of them, order No. 7056. Do you know whether there is any relation between that batch of slips and the first batch of slips just handed you?

The COURT.—Is that marked in any way?

Mr. BLAKESLEE.—Not yet. Those I think have not been considered yet.

A. Yes, sir; these slips are undoubtedly slips turned in by workmen for making the 8-inch tee bar.

Q. (By the COURT.) You say "undoubtedly." What do you know about it?

- A. They are, so far as I know.
- Q. Do you know whether they are or not? Are your initials on any of them?
 - A. Yes, sir; all of them.
- Q. (By Mr. BLAKESLEE.) What does that signify? [183—125]
- A. That I O. K.'d the cards and turned them in to the office as being correct.
- Q. And when did you O. K. them with respect to what the slips show?
- A. On the day following the date placed on the top of the card, namely, February 23, I believe, is the first.
- Q. And who are the parties whose several names appear on these slips?
 - A. Workmen in the plant.
- Q. And does the appearance of their names in those slips signify anything with respect to the work on this reamer 120?

Mr. LYON.—Objected to as incompetent.

The COURT.—The objection is overruled.

Yes, sir.

- Q. (By Mr. BLAKESLEE.) What does it signify?
- A. It signifies that the work was performed according to my instructions.
 - Q. By those men? A. Yes, sir.
- Q. I now hand you another group of slips bearing I think, all of them, order No. 6904, and ask you if these slips also relate to the matter of making over reamer No. 120?

The COURT.—Is there any dispute about reamer 120 having been made in the shop?

Mr. LYON.—None about its being made in the shop; no.

Mr. BLAKESLEE.—We are trying to show that this reamer was the first of these reamers and was made by and on behalf of Mr. Wilson—

The COURT.—I don't see how these slips throw any light on it.

Mr. BLAKESLEE.—Because we will contend that they were slips which were issued and which were marked and filled in by the workmen under Mr. Knapp, who received his instructions from Mr. Wilson and nobody else, and not from Mr. Bole.

The COURT.—Yes; I understand that. They were done through [184—126] Mr. Wilson having this thing made over. I don't understand that Mr. Bole claims that he was in charge of that shop or in charge of making these reamers. Am I right about that?

Mr. LYON.—He had no authority except with Mr. Wilson's consent to do anything on any underreamer. And while we do not admit that he did not have anything whatever to do with the making of this thing over, it must have been by Mr. Wilson's consent and under Mr. Wilson's authority. He could not touch one of these reamers without it.

Mr. BLAKESLEE.—And we furthermore wish to show diligence with respect to making this reamer over immediately after its conception by Mr. Wilson—The COURT.—All right.

Q. (By Mr. BLAKESLEE.) These slips passed through the shop of the Wilson & Willard Manufacturing Company under your superintendence in connection with making over reamer 120?

A. Yes, sir.

Mr. LYON.—Put the slips in evidence. We are not questioning the slips.

The COURT.—I don't see why you don't put them in evidence. He has identified them.

Mr. BLAKESLEE.—We want to tie them up with that particular work.

Q. (By the COURT.) Do these slips relate to that reamer 120? A. Yes, sir.

Mr. BLAKESLEE.—We offer in evidence the slips bearing the order No. 6904, as "Defendant's Exhibit Order Papers and Sketches Pertinent to the Making over of Reamer 120," and ask that the same be received and marked, and also offer with it the shop envelope in which these slips have been retained.

(Marked Defendant's Exhibits 6 and 7.) [185—127]

Mr. BLAKESLEE.—We also offer in evidence the group of slips marked Order No. 7056, as "Defendant's Exhibit Shop Order Slips Pertinent to the Making Over of Reamer 120," with the shop envelope of the same, and ask that the same be received.

(Marked Exhibit 8.)

Mr. BLAKESLEE.—We also offer in evidence the outline sketch on yellow paper identified by the witness, as "Defendant's Exhibit Knapp single-piece

Key Reproduction Sketch."

Q. (By Mr. BLAKESLEE.) To your knowledge did Mr. Robert E. Bole, the complainant in this case, have anything to do with the execution of order No. 6904 or the associated order No. 7056 for making over reamer 120?

Mr. LYON.—Objected to as leading and incompetent, calling for a conclusion of the witness, and not for a statement of facts.

The COURT.—I think, Mr. Blakeslee, the proper way is to ask the witness if he saw Mr. Bole have anything to do with it.

Mr. BLAKESLEE.—He might have heard him have something to do with it.

The COURT.—Ask what he said or did; what he saw him do or heard him say about it.

Mr. BLAKESLEE.—The question is withdrawn.

Q. To your knowledge did Robert E. Bole, the complainant in this case, give any instructions or assistance by act or word of mouth in connection with making over reamer 120 to include the single-piece key?

Mr. LYON.—The same objection.

The COURT.—Overruled.

A. Not to my knowledge.

Q. (By Mr. BLAKESLEE.) Do you know of any other reamer having been made or fitted with such a single-piece key prior to the [186—128] transformation of reamer 120? A. No, sir.

Q. Did Mr. Robert E. Bole at any time submit to you a sketch or drawing or outline of such a single-

(Testimony of William G. Knapp.) piece key prior to the completion of this making over of reamer 120?

Mr. LYON.—Objected to as leading and as incompetent.

The COURT.—The objection is overruled.

A. No, sir.

Q. (By Mr. BLAKESLEE.) Did you receive instructions as to the making over of this reamer 120 from anybody other than the defendant, E. C. Wilson? A. No, sir.

Mr. LYON.—Objected to as leading and calling for a conclusion of the witness.

The COURT.—It looks to me like it is evidence proving a negative. It is not very material. It don't have much weight. It is in now, let it go.

- Q. (By Mr. BLAKESLEE.) Do you know what was done with this reamer 120 after it had been made over? A. Yes, sir.
 - Q. What was done with it?
- A. It was finally sold to the Norbeck & Nicholson Company, South Dakota.
- Q. Can you state when it was shipped to them, if it was shipped?
- A. I cannot state exactly. It was shipped, but I cannot give the exact date.
 - Q. Can you give the month?
 - A. I think it was in June.
 - Q. What year? A. 1911.
- Q. Please state briefly what was done in making over this [187—129] reamer 120, including the fitting of it with a single-piece key.
 - A. The under-reamer was disassembled and taken

to the blacksmith's shop and annealed. In other words, to make it soft so we could machine it. The mouth of the reamer was milled out to standard size. The hole in the reamer body was enlarged to a larger size to accomodate the new-style key and was fitted with a bottom bolt or safety bolt.

- Q. What was the purpose of that safety bolt?
- A. To prevent the loss of cutters in case the tee bar should break in the hole.
- Q. How was provision made for supplying and fitting the single-piece key in this reamer, and what was done in those respects?
- A. Reamer No. 120 was a reamer of the old style 2-piece key type, and other than the machining which I mentioned, it was not necessary to do anything more to accommodate the single-piece key.
- Q. And after the key was first put in that reamer do you know whether it was taken out at the shop again? A. It was.
 - Q. How was it taken out?
- A. It was first taken out with a lever or hooked tool.
 - Q. Who did that?
- A. I don't just remember. It was one of the machinists.
- Q. Do you remember of its being taken out in any other manner while it was in the shop?
- A. Yes, sir; it was taken out with the tang end of a file.
 - Q. Who did that? A. Al Houriet.
 - Q. Who was he?

- A. A machinist in my employ at that time.
- Q. Did you see him do it? A. Yes, sir. [188—130]
 - Q. How did he go about it?
- A. I believe he had taken the reamer down, or something like that. And among the tools which he had used was a file laying on the floor, without a handle, and when he went to disassemble the reamer he picked up the file and just stuck it in there and pried out this key.
- Q. And how was the key taken out after the file was put in place?
- A. The file was inserted under one end of the key and raised up so as to clear the shoulder on the bottom edge of the key and then driven from the opposite side of the reamer and driven through.
- Q. Can you produce any drawing or showing which you had at the time this reamer 120 was made over and which shows any of the features thereof?
- Mr. LYON.—We object to that, your honor, as calling for a conclusion of the witness.

The COURT.—I think so.

Mr. LYON.—Hand him the drawing and ask him if he ever saw it before, and, if so, what it is.

Mr. BLAKESLEE.—I withdraw the question.

- Q. I hand you a drawing or showing on brown paper and ask you if you know what it is, and, if so, what you know about it.
- A. Yes, sir. This is a drawing showing the teebar that we used in reamer No. 120.
 - Q. On what part of the sheet is this tee bar shown?

- A. On the upper part of the sheet.
- Q. How is it marked for identification?
- A. "Standard 8-inch tee" on one end, which is encircled with red pencil.
 - Q. The word "Standard" appearing "Std."?
 - A. Yes, sir. [189—131]
- Q. What is shown at the lower left-hand portion of this sheet?
- A. An exact outline of the key that was used in this reamer, the first key that was used in the reamer.
- Q. Do you know who made this exact outline of the key on this sheet? A. Yes, sir.
 - Q. Who? A. Myself.
 - Q. How did you make it?
- A. By simply laying the key down on the sheet and using a pencil and tracing around the edge of the key.
 - Q. What key was that?
 - A. The first 1-piece key that was used in our plant.
 - Q. When did you make this outline of the key?
 - A. April 22, 1911.
 - Q. How did you come to make it?
 - A. I made it as a record.
 - Q. For what purpose?
- A. To be used in case we had to send another key to parties who bought the under-reamer.
- Q. And having made such sketch of the key, what did you do with this sheet with the sketch on it?
- A. This sheet was turned in to the office and filed away with the rest of the data on this under-reamer.
 - Q. From whom did you obtain the sheet with the

(Testimony of William G. Knapp.) tee bar showing on it?

- A. I believe our draughtsman, Mr. Bandell, handed that to me.
- Q. And was it or was it not used in connection with making over this reamer 120?
 - A. It was used.
- Q. Prior to the commencement of work in making over this reamer 120, and during the time you were in the shop of the Wilson & Willard Manufacturing Company, was any other under-reamer made or made over having such single-piece key device? [190—132]
 - A. Prior to the time of making over 120?

Mr. LYON.—Objected to as leading.

- Q. (By Mr. BLAKESLEE.) Prior to the time of making this over? A. Not to my knowledge.
 - Q. When did you come to the shop, again, please?
 - A. In December, 1908.
- Q. Prior to the making over of this reamer 120, had you ever seen or had any knowledge of an underreamer containing such a single-piece key?
 - A. No, sir.
- Q. Can you state approximately how many Wilson under-reamers embodying or containing such single-piece key were made in the shop of the Wilson & Willard Manufacturing Company from the time reamer 120 was made over until the first of February, 1913?

Mr. LYON.—That is objected to as irrelevant and immaterial. Any rights they had necessarily—or the rights of anyone, by the making of this reamer 120 were fixed; that was a reduction to practice, on be-

half of someone, and it don't make any difference, so far as priority of invention is concerned or anything else, whether they made another after that or a hundred thousand of them.

Mr. BLAKESLEE.—We disagree. We want to show diligence in exploiting our invention.

Mr. LYON.—We have admitted that you have been making them.

The COURT.—That admission will go, and there will be no further evidence on that.

Mr. BLAKESLEE.—Will the admission be that we made a large number?

Mr. LYON.—We admit that you have been making them ever since and we want an accounting for what you have made. You can call it a hundred or five hundred. If you will admit that there were five hundred made I will admit it.

Mr. BLAKESLEE.—Prior to February 1, 1913?
Mr. LYON.—No. I don't know what the facts were.

Mr. BLAKESLEE.—Then we ask the question to be answered. [191—133] That is the period we are concerned with, and not the period we are charged with infringement.

Mr. LYON.—I admit that there were a large number made. I am not going to say five hundred.

The COURT.—Do you know how many were made and between what periods?

Mr. BLAKESLEE.—Between the time of making this and February 1, 1913—practically two years after. I can only estimate the number.

The COURT.—Then don't do it. You ought to have books to show that. Somebody ought to know. It seems to me as though the admission ought to be as good as the witness's estimate.

Mr. BLAKESLEE.—I think so, if the admission is that there were a large number made, sold and used.

Mr. LYON.—I didn't say anything about "used" — "made and sold." That is all this man knows about it.

The COURT.—That is all you can show by this witness, surely.

Mr. BLAKESLEE.—Prior to February 1, 1913?

Mr. LYON.—That is what the admission was.

Mr. BLAKESLEE.—I want an admisison that amounts to something—and at the shop of the Wilson & Willard Manufacturing Company? It is admitted it was made at the shop of the Wilson & Willard Manufacturing Company?

Mr. LYON.—You heard the admission three or four times.

Mr. BLAKESLEE.—No, I did not; I heard some of it but not all of it.

We offer in evidence the sketch referred to by the wtiness.

- Q. (By the COURT.) Who made these red marks on there, Mr. Knapp? A. I did.
 - Q. When did you make those red marks?
- A. I believe that date over there will show, April 22, I believe, 1911. [192—134]
 - Q. Where were you when you made them?
 - A. I was in my office at the shop of the Wilson &

(Testimony of William G. Knapp.) Willard Manufacturing Company.

Q. Why did you write "special tee for 8-inch

reamer No. 120" on here, in lead pencil?

A. Partly because we had never made one so heavy before, and partly because the slot is through the tee, different than the way we would have made them if we had not used the old-style body.

Q. Was this made before or after the construction of this No. 120—this draft?

A. The drawing of the tee bar was made before. The drawing of the key was made after it was completed.

Q. How long after?

A. I can't say positively.

Q. Well, approximately.

A. A month or six weeks.

Q. A month or six weeks after. On this drawing here the two lower corners or lower ends have a notch in them that does not appear on this key that is introduced in evidence, if I understand it.

A. Yes, sir.

Q. These notches right here. Those don't appear on this key, do they? A. No, sir.

The COURT.—May I mark that so as to identify it? I have drawn a line from the notches that I desire to indicate, and write "T" at the end of it. Was the key that you made for reamer 120 constructed like this drawing on here? A. Exactly.

Q. And had those nicks out of the lower end as indicated by the arrows pointing from "T"?

A. Yes, sir.

- Q. And that is different, as I understand it, from the key in [193—135] evidence. Is that right?
 - A. Yes, sir.
- Q. (By Mr. BLAKESLEE.) What was the purpose of those notches?
- A. The notches were put in there to enable the operator to withdraw the key with a hooked tool that we thought necessary at that time.
- Q. And how many such keys for Wilson reamers did you make with such notches?
 - A. I don't think over half a dozen.
 - Q. Why were such notches abandoned?
 - A. Because we found that they were not necessary.
 - Q. For what reason?
- A. We found that by driving a wedge-shaped tool underneath the key it would raise it enough so that you could drive it out.
- Q. And after that the keys were made and installed and shipped without those notches? A. Yes, sir.
- Mr. BLAKESLEE.—We offer in evidence the brown paper sheet with the sketch and other matter which is under discussion, as "Defendant's Exhibit Wilson Reamer Tee and Key Sketch of 1911," and ask that the same be received.
- Q. (By the COURT.) Do you know where that reamer 120 is now? A. No, sir.

The COURT.—Have you made any effort to get that original key?

Mr. BLAKESLEE.—I think I might have developed that with Mr. Wilson. He can explain what is the practice about those reamers. The reamer after

it is used for some time becomes worn out and it is necessary—

Mr. LYON.—If there is anything in the history of that reamer to go into this case, I would like to have somebody testify that knows something about it. The reamer has never been produced yet.

The COURT.—That is all I want to know abopt it. Is that right?

Mr. BLAKESLEE.—No, sir; it has never been produced. It was [194—136] shipped to South Dakota and never brought back. That is all.

Cross-examination.

(By Mr. LYON.)

- Q. Mr. Knapp, this reamer No. 120 was bored out in order to receive the new enlarged tee bar, was it?
 - A. Yes, sir.
- Q. Was that reamer No. 120 ever assembled with a single-piece key device until after it was rebored and the enlarged tee completed?
 - A. Not to my knowledge.
 - Q. You would have known it if it had been?
 - A. In the plant, yes.
- Q. Now, when was this enlarged tee completed? Wasn't it March 8, 1911?
- A. I believe that is the date that I turned the shop order in, but the tee may have been completed before that time.
- Q. I am asking you now as a matter of fact if it was not March 8, 1911, upon which that tee was completed.
 - A. No; I think it was completed earlier than that.

- Q. How much earlier?
- A. I couldn't say exactly.
- Q. Will you refer to the slips here and identify for me the one which shows the last work on that slotted tee? A. I will try. February 27.
 - Q. You testified in the interference, did you not?
 - A. I did.
- Q. Was not question No. 57, as follows, asked you, and answered by you as follows: "The next sheet—"

The COURT.—Hadn't you better show that to him so that he can have it before his eyes and so there will be no necessity to reread it, and all that sort of thing? [195—137]

By Mr. LYON.—(Showing transcript to the witness.) "Q. The next sheet?

A. The next sheet was dictated by myself for the purpose of forging and machining the tee bar for reamer No. 120, also making three springs for the same. This work was finished and the order turned in March 8, 1911, and O.K.'d by myself.' Is that a correct statement of the testimony given by you at that time?

- A. I believe it to be.
- Q. And was that testimony true and correct?
- A. The testimony is correct in this respect: that that is the time and the date that I O.K.'d the shop order and turned it in to the office; not the exact date when the article was completed.
- Q. Have you any personal recollection as to any of these matters other than as they are on these slips—as to the work or the date?

- A. Nothing other than what these slips show.
- Q. Then when you gave the answer that the work was completed and the shop order turned in March 8, 1911, that was your recollection and your best information from these shop slips at the time that you gave that testimony, wasn't it?
 - A. I believe I meant to say—
 - Q. Answer the question.
- A. Well, it is just as I stated here before. I think that is the time I O.K.'d that shop order and turned it in.
- Q. Since giving your testimony in that interference you have talked this case over with someone else, haven't you?

 A. Not to speak of.
 - Q. Not before taking the stand here?
 - A. I read over my previous testimony.
 - Q. Did you read my brief in the Patent Office case?
 - A. No, sir.
- Q. Did you discuss anything about the hearing there with anyone? [196—138] A. No, sir.
- Q. Talk with Mr. Blakeslee or Mr. Wilson about it in any manner?
 - A. No, sir; not about the Patent Office suit.
- Q. Not with relation to when this slotted tee was completed? A. No, sir.
 - Q. Or when it was first put in the reamer?
 - A. No, sir.
- Q. When was it that Mr. Houriet made this discovery that you could remove this single-piece key by simply driving in the tang end of a file?
 - A. I believe it to be probably the second or third

(Testimony of William G. Knapp.) time we assembled that reamer.

- Q. And when was that, according to your recollection?
- A. I believe that to be in the latter part of February.
- Q. When you testified in this case in the Patent Office you did not even know the name of that man, did you? A. Who? Al Houriet?
- Q. Who the workman was that was alleged to have made that discovery. A. I don't think so.
- Q. Didn't you testify that a workman did, and you didn't know his name?
 - A. I hardly think so, unless you have it there.

The COURT.—Before you get away from that, is there a conflict in the witness' testimony and what he gave at that time?

Mr. LYON.—I allege that there is, absolutely, yes, sir.

Mr. BLAKESLEE.—We agree to have it shown as easily as possible—

The COURT.—Wait a minute, Mr. Blakeslee. What is the date given in the testimony that you read?

Mr. LYON.—He says, "This work was finished and the order turned in on March 8, 1911, and O.K.'d by myself." [197—139]

The COURT.—What is the testimony now?

Mr. LYON.—He says he thinks the work was finished somewhere about February 27, 1911.

A. That was the last time-card. May I explain? The COURT.—Yes, sir.

A. The workmen as they perform the work, at the end of every day they turn in a card with the date, their name and the article, and the amount of time they put in on the job.

The COURT.—I understand that.

A. The last card turned in on the tee bar was February 27. Now, these yellow slips were turned over to me for the general work; that is, the complete job. Now, there are several operations on each job. I didn't turn those in until the complete job was finished.

Q. (By the COURT.) When was that?

A. March 8. That is when reamer 120 was completed entirely. Now, the tee bar could have been finished before that.

Q. (By Mr. LYON.) On March 8, 1911, this reamer 120 was completed in its reorganized form with this single-piece key device in it, was it?

Mr. BLAKESLEE.—We think this is misleading. The COURT.—I think I under stand the question, and the witness ought to understand it.

A. I think the reamer was completed before that time, but not tempered, if you might term that part of the completion.

Q. (By Mr. LYON.) What did you mean by saying in the preceding answer that the reamer was completed on March 8, 1911? I want to find out what your present testimony is.

Mr. BLAKESLEE.—If your Honor please, the testimony is not that way. The testimony was that the reamer was finished and the order was turned in

on March 8. He does not say it was finished on March 8. (The testimony is read at the request of the Court.)

The COURT.—That is what I understand teh testimony to be, Mr. Blakeslee. [198—140]

- Q. (By Mr. LYON.) So that there may be no misunderstanding, Mr. Knapp, are you testifying that this reamer order 120 was entirely completed on March 8, 1911? A. May I look at these slips.
 - Q. Certainly. I want to know what the facts are. The COURT.—We don't want any guessing about it, if we can get at the facts.
 - A. I made a mistake when I made that assertion.
 - Q. (By Br. LYON.) I thought so. What is the correct statement?
 - A. The date this shop order was turned in for the reconstruction of reamer 120 is April 22. But the reamer could have been completed before that time.
 - Q. Now, with the best information that you can get from all these slips, are you prepared to state that that reamer was completed before April 14, 1911?
 - A. I am.
 - Q. When was it completed, then, according to your present deduction? A. March 6, 1911.
 - Q. Did Mr. E. C. Wilson at any time give you a sketch of a single-piece key that was to be made and used in reconstructing this reamer 120 otherwise than as the rough indication of it on his hand?
 - A. Not that I remember of.
 - Q. Will you state positively that he did not?
 - A. No, sir; I could not.

- Q. Will you state positively that you did not have a sketch of such single-piece key on paper during the time that this reamer No. 120 was being reconstructed? A. I could not state so now; no, sir.
- Q. How many of these 1-piece keys did you say were made with these notches in the lower extreme corners? [199—141]
- A. Very few. I believe I just testified not over a half a dozen. I couldn't say with any degree of certainty just how many.
- Q. Are you positive that more than one was made with such notches?
 - A. Not absolutely positive; no, sir.
- Q. Now, Mr. Knapp, you are familiar with the customs in the Wilson & Willard shop in regard to the manner of fastening drawings or paper on boards when they are making drawings there, aren't you?
 - A. Yes, sir.
- Q. They are ordinarily fastened to the board by thumb tacks?

Mr. BLAKESLEE.—Objected to as immaterial.

The COURT.—Overruled.

- A. You mean on the draughting board?
- Q. (By Mr. LYON.) Yes.
- A. Yes, sir.
- Q. And how many thumb tacks are ordinarily used?
 - A. Ordinarily four, and sometimes six.
- Q. Now, referring to "Defendant's Exhibit Wilson Reamer Key and Tee Sketch of 1911," there has evidently been a portion of this paper cut off at the right-

(Testimony of William G. Knapp.) hand side, hasn't there?

Mr. BLAKESLEE.—Objected to as calling for a conclusion and not for a statement of facts. The exhibit speaks for itself.

The COURT.—I don't know. He saw this paper at different times. He may know whether anything was cut off or not.

Mr. BLAKESLEE.—Then the question is objected to as indefinite as it does not state the time.

The COURT.—I will let him answer the question.

A. To the best of my knowledge this drawing is complete the way I first saw it.

Q. (By the COURT.) Just as it is now?

A. Yes, sir; with the exception of the notations that I put on there myself. [200—142]

- Q. What have you to say with regard to the absence of any thumb-tack holes except in the left-hand corner of this sheet of paper? Have you any distinct recollection of that paper?
- A. Not any distinct recollection of the paper other than it is customary for draughtsmen when they lay out a piece of paper on their table or their board to get a large piece, and they start and make their drawing in one corner, and if they have some left they cut it off. Otherwise they fill the complete sheet of which we have standard sizes.
- Q. And as far as you can recollect this was cut down when you first saw it in this way?
 - A. As far as I can recollect; yes, sir.
 - Q. And when did you first see this drawing?
 - A. I can't tell you exactly. There is no date, and

I have no data and no way of knowing.

- Q. You have no recollection of it otherwise than the fact that you dated the 4-22-11 on it in red pencil. Is that true?
- A. I recollect of having the drawing when I made the tee bar.
 - Q. For that reamer? A. No, sir.
- Q. You have no recollection as to when you first saw it or its entire condition at any one of those times otherwise than as I have stated, have you?
- A. Well, I believe that I stated that is practically the way that I received it, and I had it at the time that we manufactured the tee bar.
- Q. Did you ever see this drawing, with any of the portion which has evidently been cut from the paper here, with that on it? A. Not to my knowledge.
- Q. Will you state positively that you never did see it with an additional piece of paper on there?
 - A. I think I can.
- Q. How long after Mr. Houriet, as you say, made this discovery [201—143] that the single-piece key could be removed with the tang end of a file was it before you dropped the making of the single-piece keys with the notches, to which your attention has been called, in the lower corner?
 - A. I cannot state exactly; it was a very short time.
- Q. Did you ever make one of the single-piece keys for a Wilson under-reamer with such notches in it after Houriet made that discovery?
 - A. I don't remember.
 - Q. You don't remember having made one that way

(Testimony of William G. Knapp.)
after that time? Is that your testimony? Is that
correct? A. Yes, sir.

- Q. Will you state positively that this reamer No. 120 was shipped to the Norbeck & Nicholson Company with this key in it with the notches in the corner as indicated?
- A. To the best of my knowledge; yes, sir. In fact, I made the sketch of that key, or the outline, just previous to shipping the reamer.
- Q. And previous to shipping that reamer you had not abandoned the notches in the corners of the key, had you? A. I cannot say as to that.
 - Q. What is your recollection?
 - A. I don't think we were using them.
- Q. What is the object of the slight bevel at the lower corner of the key of Defendant's Exhibit 1?
 - A. This point here, Mr. Lyon?
 - Q. Yes.
- A. That is beveled off for the purpose of allowing the key wedge to be inserted to lift the key up to clear this shoulder.
- Q. In order to allow whatever kind of a tool you drive in there to run under easily? Is that it?
 - A. That is the idea; yes, sir. [202—144]
- Q. What would be the effect upon such an instrument as this used in raising this end of the key if these beveled portions were not so beveled on the key?
- A. You can have that key perfectly straight on the bottom and still insert the key wedge underneath it, provided the key wedge was sharp enough.
 - Q. And then, if I understand you correctly, it is

for the purpose of permitting the use of a more blunt key wedge?

A. Also to make the insertion easier; that is all. Mr. LYON.—That is all.

Redirect Examination.

(By Mr. BLAKESLEE.)

Q. I now show you "Defendant's Exhibit Specimens of Grigsby's Handwriting or Shipping Receipt," and ask you if you know anything about it.

Mr. LYON.—Objected to as irrelevant, immaterial and not redirect examination.

The COURT.—Overruled.

A. This looks very much like Mr. Grigsby's signature at the bottom, and pertains to the 10-inch Wilson under-reamer, No. 496, with one small lever attached, shipped to the Kern Trading and Oil Company at Kerto, California.

- Q. (By Mr. BLAKESLEE.) Do you know what the significance of that "one small lever attached" is?
- A. Yes, sir. That is the small lever for raising up the end of the key to allow it to be driven out.
- Q. And with what type or with what form of singlepiece keys was such small lever used?
- A. As far as I know the same as shown here, with the small key. Of the same type as that.
- Q. (By Mr. LYON.) You mean the one out of "Defendant's Exhibit 1"? [203—145]
 - A. Yes, sir.
- Q. (By Mr. BLAKESLEE.) I show you a lever or piece of metal, rather, and ask you if you know

(Testimony of William G. Knapp.) anything about such a design of metal.

Mr. LYON.—Objected to as not redirect examination.

Mr. BLAKESLEE.—I am going into this question of the lever and notches, and so forth.

The COURT.—Is it material in the case?

Mr. BLAKESLEE.—I think it is material.

A. The design of that lever is very similar to the first levers we used for removing the keys from the under-reamer—the single-piece keys. That is what those notches in the drawing illustrated—to hook underneath there and pull it out.

Q. Do you know whether that is the kind of lever referred to in the receipt before you?

Mr. LYON.—Objected to as leading and suggestive.

Mr. BLAKESLEE.—I ask as to his knowledge.

The COURT.—Overruled.

A. To the best of my knowledge it is, yes, sir.

Mr. LYON.—We move to strike the answer from the record as not responsive. He does not say that he does know that it is or does know that it is not.

A. To the best of my knowledge it is.

Mr. LYON.—That don't mean anything.

Mr. BLAKESLEE.—I asked him within his knowledge.

Q. Do you know whether there was such a lever shipped with reamer 120 which went to the Norbeck & Nicholson Company?

Mr. LYON.—This is all leading. I think counsel ought to refrain from leading the witness.

The COURT.—He asks him if he knows.

- A. I think there was; yes, sir.
- Q. (By the COURT.) Do you know about it?
- A. I am positive that there was; yes, sir. [204—146]
- Q. (By Mr. BLAKESLEE.) Do you know whether any such lever was at any time used in the shop of the Wilson & Willard Manufacturing Company to extract such single-piece key from reamer No. 120? A. Yes, sir; there was.
- Q. How long had such a lever been in the shop of the defendant company prior to that time, to your knowledge?
- A. We used a lever similar to construction to that for raising the block and compressing the spring on the old style block and screw type under-reamer.
 - Q. Do you know who designed such lever?
 - A. No, sir; I do not.
- Q. How long had it been in the shop for that purpose to your knowledge? A. A year and a half.
- Q. Are we to understand or not that your recollection of making over reamer 120 rests upon the various shop slips of order 6904 and order 7056?
- Mr. LYON.—Objected to as leading and calling for a conclusion of the witness.

The COURT.—The objection is overruled.

- A. That is the only way I have at this time; yes, sir.
- Q. (By Mr. BLAKESLEE.) To what extent do you base your recollection on those shop slips?

The COURT.—I think he has stated that that is

the only way he gets at the time—by referring to those. I don't see how you can get anything else out of the witness.

Q. (By Mr. BLAKESLEE.) I will ask another question. Irrespective of the details of the construction and assemblage of parts of reamer 120, what have you to say as to any recollection of the act of making over reamer 120 at the shop?

Mr. LYON.—Objected to as leading and as already answered. [205—147]

The COURT.—The objection is sustained. Mr. Witness, do you remember this reamer 120 being in the shop? A. Yes, sir.

- Q. You distinctly remember that? A. Yes.
- Q. And you made it over? A. Yes, sir.
- Q. You distinctly remember that? A. Yes, sir.
- Q. But you don't have any recollection as to the date in regard to when that work was done except as indicated to your mind by these slips?
 - A. Yes, sir, which I have O. K.'d.
 - Q. Have you any independent recollection?
 - A. No, sir.
- Q. You testify, then, from what these slips indicate to your mind is the date when that work was done? A. Yes, sir.

The COURT.—I think that makes it clear.

- Q. (By Mr. BLAKESLEE.) And how with respect to the sketch you say Mr. Wilson made for you on his hand with a pencil of this single-piece key? What is such recollection based on?
 - A. As far as dates go, nothing other than that it

(Testimony of William G. Knapp.) preceded these time-cards.

- Q. And have you anything upon which you base such recollection as to the occurrence itself?
- A. Other than I was running through or machining a pretty good-size order of old-style tee bars and they were partially machined when Mr. Wilson in passing through the shop one day discovered them and told me not to go ahead with them any further, as they were contemplating changing over their reamer and adopting the new style. [206—148]
- Q. What relation is there between that occurrence and the making of the sketch on his hand for you?
- A. The making of that sketch probably occurred two or three days after he told me to cease operations on those old-style tee bars.
- Q. Was it or was it not customary for Mr. Wilson to give you instructions by means of such hand sketches with a pencil?

Mr. LYON.—Objected to as leading— The COURT.—The objection is sustained.

Q. (By Mr. BLAKESLEE.). Now, before these various order slips were O.K.'d and turned in, as I understand it, on March 8, 1911, was reamer 120, or was it not, so far completed in its new form and condition that it might be assembled with a single-piece key?

Mr. LYON.—Objected to as leading and argumentative.

The COURT.—The objection is sustained.

Q. (By Mr. BLAKESLEE.) How far was reamer 120 completed prior to March 8, 1911?

Mr. LYON.—Objected to on each of the last grounds.

The COURT.—This witness has been exhausted on that subject. You asked him about it and he was cross-examined. I think you have spent enough time on it.

Mr. BLAKESLEE.—There are some points obscure in my mind as to his testimony.

The COURT.—Get down to it directly, then.

Q. (By Mr. BLAKESLEE.) After February 27, 1911, what was done on this reamer 120?

Mr. LYON.—Objected to on the ground that the witness has shown—

The COURT.—Overruled.

A. I couldn't say anything about that without referring to the time-cards again.

Q. (By Mr. BLAKESLEE.) You may refer to the time-cards.

The COURT.—I don't think so. The time-cards show. There is no reason for this witness to state it if the time-cards show.

Q. (By Mr. BLAKESLEE.) When was this reamer 120 hardened or [207—149] tempered, as you say it was?

A. The time-cards also show that, Mr. Blakeslee.

Q. And what was done with this reamer between March 8, 1911, and April 22, 1911, when you made the sketch of the key on the exhibit paper before us?

A. It was in the machine shop for a time and later removed to the blacksmith-shop and there used for demonstration purposes.

Q. Do you recollect having any paper sketch whatsoever of the single-piece key before you during the time reamer 120 was being made over?

A. I have no clear recollection of having any.

Mr. BLAKESLEE.—That is all.

Recross-examination.

(By Mr. LYON.)

Q. Mr. Knapp, you say Mr. Wilson drew a sketch on his hand of this single-piece key. How long before you started work on the rebuilding of reamer 120 was it that he made that sketch on his hand for you?

A. I believe it was a matter of possibly a day; not more than that.

Q. And who was present at that time besides Mr. E. C. Wilson?

A. No one but myself.

Q. Now, you have been in the courtroom here during the taking of most of the deposition of Mr. E. C. Wilson in this case, haven't you? A. Yes, sir.

Q. And you have heard his testimony in regard to calling a conference in the back of the shop and his testimony that he believed you were present at such conference? A. Yes, sir.

Q. What have you to say as to your presence at any such conference? [208—150]

A. I don't remember being present at any conference of that kind.

Mr. LYON.—That is all.

Mr. BLAKESLEE.—That is all.

(Whereupon an adjournment is taken until tomorrow, March 25, 1915, at 10 o'clock A. M.) [209 —151]

[Testimony of Charles E. Wilcox, for Defendants.]

Thursday, March 25, 1915, 10 o'clock A. M.

CHARLES E. WILCOX, called as a witness on behalf of defendants, being first duly sworn, testified as follows:

Direct Examination.

(By Mr. BLAKESLEE.)

- Q. Please state your full name, age, residence and occupation, Mr. Wilcox.
- A. Charles E. Wilcox; forty-seven years old; residence, Woodford, California; occupation, oil well driller.
- Q. What do you mean by the term "oil well driller"?

 A. Sinking of oil and gas wells.
- Q. What sort of work have you done of that nature? A. Drilling.
 - Q. What have you done in drilling operations?
 - A. Commenced and completed wells.
 - Q. What sort of tools have you used?
 - A. What is known as standard tools.
- Q. What kind of tools do you mean by "standard tools"? For what purposes are they used and what are they called?
- A. Well, I worked with tools consisting of the bit, stem, jars and rope sockets.
 - Q. (By the COURT.) Ordinary oil well tools?
 - A. Ordinary oil well tools.
- Q. (By Mr. BLAKESLEE.) You have used under-reamers, casing spears and casing perforators and drilling bits, and so forth, have you?

(Testimony of Charles E. Wilcox.)

- A. Yes, sir.
- Q. In what fields?
- A. Mostly in Pennsylvania and Ohio. [210—152]
- Q. How long have you been in California?
- A. Fifteen years.
- Q. What has been the nature of your work in California in the oil well industry?
- A. Well, along the lines of drilling wells and selling oil well machinery and oil well tools.
 - Q. Have you ever used a Wilson under-reamer?
 - A. No, sir.
- Q. What experience have you had with Wilson under-reamers, if any?
- A. I worked for the Wilson & Willard Manufacturing Company as their field representative and outside salesman for a matter of four years.
 - Q. That is the defendant company in this suit?
 - A. Yes, sir.
- Q. What period of time was it that you were connected with this company?
- A. From along about the first of January, 1911, up until quite recently of this year.
 - Q. Up until this year? A. Yes, sir.
- Q. When did you sever your connection with that company?
- A. About the 1st of February, I believe, or the last of January.
- Q. Briefly, what was the general nature of your work or services with the Wilson & Willard Manufacturing Company?
 - A. I solicited business through the different oil

(Testimony of Charles E. Wilcox.) fields of California.

- Q. What did you sell for that company?
- A. Under-reamers, elevators and circulatingheads.
- Q. Have you examined "Defendant's Exhibit 1" here in the room, the under-reamer exhibit? [211—153] A. I have not.
- Q. Please refer to it briefly and tell us if you are familiar with this device.
 - A. Yes, sir; I am. (After examining exhibit.)
- Q. When did you first see a Wilson under-reamer of this sort including the single-piece key which confines the lower end of the spring?
- A. Sometime between the 1st of January, 1911, and I would say the 1st of March.
 - Q. Where did you see it?
- A. The Wilson & Willard Manufacturing Company's place of business at 15th and Santa Fe Avenue.
- Q. Did you see others of that same general construction including the one-piece key during the year 1911?
- A. I have seen others of the same type in 1911; yes, sir.
 - Q. And during 1912? A. Yes, sir.
 - Q. By whom were they made?
- A. By the Wilson & Willard Manufacturing Company.
- Q. Approximately how many did you see in those two years?

The COURT.—I will sustain an objection to that.

(Testimony of Charles E. Wilcox.)

There is a stipulation on that, Mr. Blakeslee.

Q. (By Mr. BLAKESLEE.) What if anything did you have to do with such Wilson reamers during those years?

Mr. LYON.—I think that is immaterial, in view of the stipulation, your Honor.

Mr. BLAKESLEE.—It is to show his familiarity.

Mr. LYON.—We will stipulate that he is familiar with that type of Wilson reamer.

Q. (By Mr. BLAKESLEE.) What did you have to do in that period of time with those Wilson reamers?

Mr. LYON.—Objected to as immaterial. [212—154]

The COURT.—What do you want to prove by that?

Mr. BLAKESLEE.—I want to show a little further his familiarity and what he did with them.

The COURT.—It is admitted that he is familiar with them.

Q. (By Mr. BLAKESLEE.) Have you ever seen such a Wilson under-reamer in operation?

A. Yes, sir.

Mr. BLAKESLEE.—That, your Honor, there has been no stipulation about.

The COURT.—He has testified he has seen them in operation.

- Q. (By Mr. BLAKESLEE.) When did you first see such Wilson under-reamer in use or operation?
 - A. Along in 1911.
 - Q. And under what circumstances and where?

(Testimony of Charles E. Wilcox.)

- A. Well, I believe I have seen them in the southern field here and also in the Taft and McKittrick or Taft and Maricopa fields.
 - Q. Those are in this state? A. Yes, sir.
 - Q. How was such reamer being used?
 - A. In the general way of drilling oil wells.
- Q. What did you see in connection with its use at such times?
- A. Well, I seen them lowered in the hole and removed from the hole, change the cutters, and so on.
- Q. And what was the general purpose of using such under-reamer in oil well drilling?
- A. To enlarge the hole so that the casing would follow.
- Q. Did you make any observation as to the handling of the casing during the use of such Wilson under-reamers? A. Yes, sir.
 - Q. What was done with the casing?
- A. After the hole was reamed they lowered the casing as far [213—155] as it had been reamed.
- Q. How many times, approximately, did you see such use and operation of such Wilson reamer during the years 1911 and 1912?
 - A. Oh, I would say fifty times.
- Q. (By Mr. LYON.) · Were they successful, Mr. Wilcox, in use? A. Yes, sir.

Mr. LYON.—I think that is all you need to prove along that line.

The COURT.—You don't controvert that fact? Mr. LYON.—No, sir.

The COURT.—Well, that ends that controversy.

Q. (By Mr. BLAKESLEE.) What do you remember, and what can you tell us about the first of these Wilson under-reamers which you say you saw in the early part of 1911?

A. Well, they made one down there at the shop and kept it in different places in the shop for demonstrating purposes for quite a period of time.

- Q. Did you witness the work on this reamer?
- A. Some of it; yes, sir.
- Q. Were you in and out of the shop at that time?
- A. I was back and forth from the field to the shop, and sometimes I would be in the shop all day and other times I would be out.
- Q. Do you know in whose charge this work proceeded?
- A. I believe it was supervised by Mr. Knapp, the foreman.
 - Q. The foreman? A. Yes, sir.
- Q. And did you see that reamer when it was assembled in the shop? A. Yes, sir.
- Q. When did such a single-piece key device as you say was included in these Wilson reamers first come to your knowledge? [214—156]
 - A. You mean the key—the finished product? Or—
 - Q. Well, in the first case the finished product.
- A. Well, as I stated before, it would be sometime between the first of January and the first of March.
- Q. (By the COURT.) You saw this reamer 120 there in the shop? Q. Yes, sir.
 - Q. Did you see this 1-piece key in it?
 - A. Yes, sir.

- Q. The key in controversy in this case?
- A. Yes, sir.
- Q. Do you know when that was?
- A. As I said before, I couldn't fix it-

The COURT.—You can't fix the date any more definitely then you have fixed it?

A. No.

- Q. You have no memoranda to show the date?
- A. No, sir.

The COURT.—Go ahead.

Q. (By Mr. BLAKESLE.) When did you first hear about such a key?

The COURT.—It don't seem material when he heard about it.

Mr. BLAKESLEE.—I am trying to prove certain facts concerning the production of the key; not the manufacture, but the origination of it.

The COURT.—All right. When did you first hear about it?

- A. Well, I heard Mr. Wilson discussing something in regard to a key shortly after he got a certain letter from Mr. Williams of the Pacific Iron Works at McKittrick, California.
- Q. Did you see that letter that you have referred to?
 - Q. (By Mr. LYON.) Did you see it at that time?
 - A. No, sir.
- Q. (By Mr. BLAKESLEE.) Have you seen that letter since? [215—157]

The COURT.—He couldn't tell whether that was the letter or not if he didn't see it at the time.

Mr. BLAKESLEE.—I don't know how soon he saw it.

Q. When was that letter received, to the best of your recollection?

Mr. LYON.—Objected to as incompetent.

The COURT.—Overruled.

A. I don't know.

- Q. (By Mr. BLAKESLEE.) What knowledge have you about the receipt of that letter?
- A. I heard Mr. Wilson discussing the fact of getting a letter from Mr. Williams in regard to a key or a tee, I am not positive which.
 - Q. (By the COURT.) A key or what?
 - A. A key or a slotted tee.
- Q. (By Mr. BLAKESLEE.) How do you fix the time of the receipt of that letter?
- A. It was shortly after I went to work for the Wilson & Willard Manufacturing Company.
- Q. And how soon after the receipt of that letter, as nearly as you can fix the time of such receipt, did you first hear about this single-piece key or about a single-piece key?
- A. It was only a few days after I heard little bits of conversation in regard to the letter that I saw some sketches of a key.
- Q. Under what circumstances did you see those sketches?
- A. Mr. E. C. Wilson and Mr. R. E. Bole and Mr. A. G. Willard were standing at a desk used for a shipping clerk's desk. They were standing with their backs to me. I was standing probably four or

five feet from them, or six feet, or maybe ten. They turned around going up the center aisle. The three parties turned around and made a step or two away from the bench or desk, as though they were going up the center aisle of the shop, and Mr. Wilson [216—158] had a sketch on a yellow piece of paper of a key similar to the one that is made now and used in the Wilson reamer.

- Q. What shop do you refer to in your last answer?
- A. The Wilson & Willard Manufacturing Company's shop.
 - Q. In what part of the shop was this desk?
 - A. The north end of the shop.
 - Q. Which end was that, the front or the rear?
 - A. That would be the rear.
- Q. Was there any door opening into the shop near it? A. Yes, sir.
 - Q. How near?
- A. About eight feet, I would say, to the center of the doorway.
- Q. Do you remember what piece of machinery or what machine tool was nearest that desk in that shop at that time?
 - A. A planer, I believe, or shaper.
 - Q. How far from the desk was it?
- A. Twenty feet, I would say, or twenty-five, possibly.
- Q. And who was the Mr. Bole whom you refer to in your last answer? A. Mr. Robert E. Bole.
 - Q. One of the complainants in this case?
 - A. Yes, sir.

- Q. And Mr. Wilson is one of the defendants in this case? A. \overline{Y} es, sir.
- Q. Have you ever seen the sketch you have stated Mr. Wilson had at that time, since that time?
 - A. Not to my knowledge; no, sir.
- Q. Have you since that time attempted to reproduce the sketch you saw then?
 - A. Yes, sir. [217—159]
 - Q. When and under what circumstances?
- A. In taking testimony in regard to this interference suit, in Washington, I believe.
 - Q. Where was that testimony taken?

Mr. LYON.—That is immaterial.

The COURT.—It seems so to me.

Q. (By Mr. BLAKESLEE.) About when was it that you made this reproduction sketch?

Mr. LYON.—The sketch is here and I suppose it is going to be offered in evidence, and it is dated, and I don't see what counsel wants to waste time on it for.

Mr. BLAKESLEE.—We are wiling to cut it short. We simply want to prove our case, and that is all.

- Q. Is this the sketch you made at that time in reproduction of the sketch you saw Mr. Wilson hold?
 - A. I believe it is; yes, sir.

Mr. BLAKESLEE.—Let the record show that the witness is handed a sketch entitled "Wilson's Exhibit Charles E. Wilcox Key Reproduction Sketch," dated June 19, 1914.

- Q. What did you intend to show by that sketch?
- A. I intended to show that that was an outline of a key similar to the one that is being used in the Wilson

(Testimony of Charles E. Wilcox.) reamer at the present time.

- Q. How about the sketch that you saw Mr. Wilson hold near the shipping desk?
- Mr. LYON.—Objected to as leading and suggestive.

The COURT.—Overruled.

- A. When I drew that sketch I tried to produce a sketch as near as I could from memory of the one that Mr. Wilson had in his hand at the time at the shipping desk.
- Q. (By Mr. BLAKESLEE.) About how far away from Mr. Wilson did you stand when you saw this sketch in his hand at that time? [218—160]
- A. Well, when they turned away from the desk they passed directly past me not more than a couple of feet, I suppose.
- Q. And how far did you stand from them when you first saw the sketch?
- A. Well, that was when I first seen the sketch, when he turned around and had it in his hand and passed me. Possibly he stopped here a few minutes.
- Q. Was anything said at that time by either Mr. Bole or Mr. Wilson, and, if so, please tell us all that you remember that was so said, giving us as nearly the exact words as you can?
- Mr. LYON.—Just a moment. The question says "at that time," and I would like counsel to make that question definite and I think he should in fairness include all of the conversation that the witnesses overheard at that time, whether it was at the shipping desk, or when they turned away, or where it was, and

(Testimony of Charles E. Wilcox.) not fragments of it.

The COURT.—I think you ought to go at it directly, Mr. Blakeslee, and find out all he heard these parties say about this from the beginning to the end; as I understand it, that is one of the important circumstances in the case, and you are fooling away a good deal of time on trivial and unimportant things. Get at this thing and get out all the facts.

Mr. BLAKESLEE.—Strike out the question.

Q. Please tell us, Mr. Wilcox, all that you remember that occurred during the period of time in which you saw Mr. Willard, Mr. Bole and Mr. E. C. Wilson near the shipping desk, and the time at which you saw this sketch which you say you have here reproduced, and also what during that period of time, including all of these circumstances or episodes or acts, all that you heard either party say.

The COURT.—Q. Please state all you heard and saw about the time you saw this reamer 120 in the shop and these parties together. [219—161] All you heard any of them say when the parties were present—Mr. Wilson and Mr. Bole—about this key.

Mr. LYON.—Reamer 120 was not in existence at that time embodying this invention. This is in regard to a conversation that he heard between Bole, Willard and Wilson in regard to this single-piece key and sketch.

The COURT.—All right. State all you heard and saw about that.

A. I think, as I said before, Mr. Wilson, Mr. R. E. Bole and Mr. A. G. Willard were standing at a little

bit of a shipping desk. I couldn't hear anything they said. And finally they turned around away from the shipping desk and they stopped right opposite me. Mr. Wilson had a piece of yellow paper in his hand, and a pencil. He says, "Oh, I know how to get it in there, but I don't know how to get it out." Mr. Bole says, "Pry one end of it up and drive it out." They passed on out of my hearing, and that was about all I heard at that time.

- Q. (By the COURT.) When did that occur?
- A. Very shortly after I went to work for the Wilson & Willard Manufacturing Company, and I went to work for them about the 1st of January.
 - Q. What year? A. 1911.
- Q. (By Mr. BLAKESLEE.) And what, if anything was on the yellow piece of paper which you saw Mr. Wilson hold at this time?
 - A. There was a sketch of a key.
- Q. (By the COURT.) Did you have it in your hand? A. No, sir.
 - Q. How did you come to see this sketch?
- A. That would be the same as if a man came walking by here and stopped within two or three feet of me and was standing there talking about it holding it that way in front of him and [220—162] I would look over and see it.

The COURT.—Proceed.

Q. (By Mr. BLAKESLEE.) Can you mention anyone else who was in close proximity to yourself or to Mr. Wilson, Mr. Bole or Mr. Willard at the times you have last told us about?

Mr. LYON.—I think that is leading and suggestive and calling for a conclusion of the witness.

The COURT.—I will overrule the objection.

- A. Mr. W. W. Wilson and Mr. Knapp were over about the door. That would be five or six feet or eight feet from the desk.
- Q. (By Mr. BLAKESLEE.) Who was this Mr. W. W. Wilson? A. A brother of E. C. Wilson.
 - Q And Mr. Knapp?
 - A. Mr. Knapp was foreman of the shop.
- Q. How long were you in that vicinity? How long a period of time has your testimony covered with relation to this group of people and this talk about putting a key in and prying it out and your seeing a sketch, as you say you did?
- A. I don't believe they were there over ten minutes, or such a matter.
 - Q. How long were you in that vicinity?
- A. I believe I stayed in that end of the shop and they went away from me.
- Q. Were or were not those people of that group together when you first came to that end of the shop?
- Mr. LYON.—I object to that as leading and suggestive, your Honor.

The COURT.—It is both, but I will overrule the objection.

- A. I couldn't say whether they were all together or not.
- Q. (By Mr. BLAKESLEE.) When you first saw this group of three people together, including Mr. Wilson, Mr. Bole— That is, when you first saw

(Testimony of Charles E. Wilcox.)
them—where were Mr. Knapp and Mr. W. W. Wilson? [221—163]

A. Well, I believe they were all down at that end of the shop.

Mr. BLAKESLEE.—We offer in evidence the reproduction sketch referred to by the witness in his testimony and ask that the same be received and marked "Defendant's Exhibit Charles E. Wilcox Key Reproduction Sketch."

- Q. (By the COURT.) Is this a reproduction of what Mr. Wilson had in his hand at the time of this conversation?
- A. Yes, sir; as near as I could make it from memory.
- Q. And you did not have the sketch in your hand at the time of this conversation? A. No, sir.
- Q. Did Mr. Wilson make any offer to show it to you, or did you just incidentally see it?
- A. No, he did not; but I say, he stepped right alongside of me and I could see it.

The COURT.—Go ahead.

- Q. (By Mr. BLAKESLEE.) I show you a piece of metal and ask you if you have ever seen any such shaped metal before. A. Yes, sir.
 - Q. Where, and under what circumstances?
- A. Well, I have seen something along the same order down at the Wilson & Willard Manufacturing Company.
- Q. Do you know what it was used for there, if anything?
 - A. It was used for raising the block in a block and

screw type Wilson under-reamer.

- Q. When did you first see such a shaped piece of metal there? A. About October, 1910.
 - Q. And after that, did you see it at the shop?
 - A. Yes, sir.,

Mr. BLAKESLEE.—We ask that this piece of metal be marked for identification "Wilson Reamer Block Elevating Lever."

(Marked Defendant's Exhibit No. 9.) $\lceil 222 -$ 164]

- Q. (By Mr. BLAKESLEE.) Did you ever see such a lever used for any other purpose at that shop?
 - A. Yes, sir.
 - Q. For what purpose?
- A. When they first commenced making the present type of reamer, I believe they tried to take the key out with a tool of something the same order.
 - Q. Did you see such attempts made there?
 - A. Yes, sir.

Mr. BLAKESLEE.—That is all.

Cross-examination.

(By Mr. LYON.)

Q. Mr. Wilsox, you saw on several occasions after reamer No. 120 was completed and finished with the single-piece key device therein and the enlarged heavy slotted tee put in its place, the operatives of the Wilson & Willard Manufacturing Company using devices like "Defendant's Exhibit No. 9" in attempting to remove the single-piece key from the reamer, did you?

A. Not after the reamer was completed.

- Q. When did you see it?
- A. Well, I seen a tool of that description used, I would say, the first time or the second time that the present type of reamer was manufactured and they were assembling it.
- Q. You mean the first one or two of those reamers that were made, or what?
 - A. I mean the first one.
- Q. Is there any way that you can fix positively any of the dates of these occurrences that you have referred to?

 A. No, sir.
- Q. And so far as your recollection serves you, then, this conversation at the shipping desk and in its immediate vicinity [223—165] or proximity, to which you have been referring, might have occurred at any time between the 1st of January, 1911, and the 1st of March, 1911. Is that correct? A. No, sir.
 - Q. Wherein is it incorrect?
- A. Well, as I said before, I fix that time—the only way that I can fix the time definitely would be by the fact that Mr. Wilson had received a letter from the Pacific Iron Works at McKittrick, California.
 - Q. And you never saw that letter at that time?
 - A. No, I have not.
 - Q. When did you see that letter?
 - A I don't know as I ever saw it
- Q. You saw that letter when you gave your testimony in the interference proceeding in Mr. Blakeslee's offics last year—1914—did you?
- A. Well, it is possible. I don't recall whether I did or not.

Q. Now, please tell us what you observed these three men, A. G. Willard, Elihu C. Wilson, and Robert E. Bole, doing at this shipper's desk, at the time you have referred to?

A. I didn't see them do anything at the shipping desk. All three had their backs to me.

Q. You observed nothing whatever that they were doing? A. No, sir.

Q. How far away were you from them at that time? A. It might be six or eight feet.

Q. At any time were you invited to take part in the conversation between them either at the shipping desk or when they turned away therefrom?

A. Not at that time.

Q. At any time during that day, at any conversation with [224—166] regard to such sketch or single-piece key device?

A. I couldn't say whether it was that day or later. Wilson asked me many times what my opinion in regard to the new style reamer was.

Q. Do you now think that you took part in this conversation with regard to this sketch of the single-piece key?

A. At that time?

Q. Yes. A. No, sir.

Q. I show you a transcript of your testimony in the deposition to which you have referred, in the interference proceeding, and call your attention first to question 87 and question 88 and your answers thereto, as follows: "Q. 87. How did you come to hear about it? Tell us the circumstances and what you heard. A. Mr. E. C. Wilson and Mr. Bole, and,

I believe, Mr. A. G. Willard were standing at the shipping desk at the north end of the shop, discussing something about a key. I was standing between the shipping desk and the end of the bench, and Mr. Wilson had a sketch in his hand of a key and he turned around to Mr. Bole, and he says, 'I know how to get it in there, but I don't know how to get it out.' Mr. Bole said, 'Pry one end of it up and drive it out.' Q. 88. Who was the Mr. Bole that you refer to? A. Mr. Robert E. Bole." That is the testimony that you gave at that time? A. Yes.

Q. That is true and correct according to your then recollection? A. Yes, sir.

Q. Calling your attention now to question 103 and the answer thereto: "Q. 103. State fully what you believe with respect to the positions of Mr. Knapp and W. W. Wilson at the time of this discussion as to the 1-piece key for under-reamers. A. My impression is Mr. W. W. Wilson and Mr. Knapp were over by the door talking. What they were talking about I don't know. Understand, I was outside of the conversation between Mr. Bole and Mr. Wilson. I was not [225—167] a party to the conversation at all. Q. 104. Did you have anything to say at that time? A. No, sir. Q. Did any other person present besides Mr. Bole and Mr. E. C. Wilson have anything to say at the time of that discussion of the singlepiece key, to your knowledge? A. I believe Mr. Bole, Mr. E. C. Wilson and Mr. A. G. Willard were discussing this key. Q. Do you remember anything Mr. Willard said? A. No. Q. Do you remember

anything further that was said by any party than as you have testified? A. No, I do not." You gave that testimony? A. Yes, sir.

- Q. And that was true and correct according to your then recollection and present recollection?
 - A. Yes, sir; that is to the best of my knowledge.
- Q. In said deposition you were asked the following questions and gave the following answers, were you: "Q. 139. How far were Mr. Bole and Mr. Willard each from Mr. E. C. Wilson? A. Well, they were as close as they could get—huddled around that desk. Q. The desk was two or three feet wide by about how long? A. Well, it was about three feet long and about two feet wide. Q. Do you remember how Mr. Wilson held the sketch, or what he did with it? A. Well, when I first saw the sketch they were all there. I believe Mr. Bole and Mr. Wilson had pencils in their hands, working there, and they kind of turned away from the desk and possibly moved a step away from the desk. Mr. Wilson held the sketch in his hand and said, 'I know how to get it in, but I don't know how to get it out.' Q. How far away did you stand when Mr. Wilson held this sketch in his hand? A. Well, when they moved away from the desk, I was as close as I am to Mr. Lyon. Mr. Lyon: That is a couple of feet." Is that a correct statement of your testimony and your recollection at that time? A. Yes, sir.
- Q. "Q. 152. Did Mr. Bole at any time ever say to you that [226—168] he had made any sketch of a one-piece key for under-reamers? A. Not at that

time. Q. Did he ever at any time say so—that he had made such a sketch? A. Yes, sir. Q. When did he say so the first time? A. Well, it was quite a while after that, when the reamer got out and got into use and was a better tool than the other one was. Q. What did he say at that time? A. He said that he had devised that key." You gave that testimony and that is true? A. Yes, sir.

The COURT.—Who was this Bole?

Mr. LYON.—Q. That was the Robert E. Bole that you referred to in your last questions and answers, one of the complainants? A. Yes, sir.

- Q. (By the COURT.) Was Wilson present when that conversation occurred? A. No. sir.
- Q. (By Mr. LYON.) And in said deposition you were asked the following questions and gave the following answers: "Q. 192. When you heard these statements made by Mr. Bole and Mr. E. C. Wilson at the time Mr. Wilson had the sketch at the shipper's desk, in the early part of 1911, such sketch showing the single-piece key which you have reproduced in your sketch in evidence, what was your understanding as gathered from what you saw and heard as to the use and purpose of this key? A. Well, I understood that they were going to make a reamer of this type of key. Q. And what was the key to be used for? A. To hold the tension on the spring when the reamer was to be collapsed. Q. And to be applied to what end of the spring? A. At the lower end of the spring. Q. And the key to be held where? A. In the body of the reamer and in the slot

of the tee bar." That is a true and correct statement of your testimony which you gave at that time?

- A. Yes, sir. [227—169]
- Q. And it was your recollection at that time?
- A. Yes, sir.

Q. Q. 211: "In answer to question 111 asked you on direct examination you made a sketch which has been offered in evidence as 'Wilson's Exhibit Charles E. Wilcox Key Reproduction Sketch.' Are we to understand that such sketch is the reproduction, according to your best recollection, of the sketch that Mr. E. C. Wilson had in his hand when he turned away from this shipping desk and made the remark I have just quoted and to which Mr. Bole answered, 'Pry one end of it up and drive it out.' A. As I remember the sketch in his hand, as near as I can remember it is what I drew on that paper. Q. 212. After Mr. Wilson had turned away from the shipping desk and made this remark and Mr. Bole had answered it in the manner referred to, did either Mr. Wilson or Mr. Bole make any addition or alteration in such sketch? A. Not to my knowledge. Q. Not while you were present? A. No, sir. Q. Up to the time that Mr. Wilson turned away from the shipping desk with this sketch and made this remark, and was so answered by Mr. Bole, as testified by you, you had paid no particular attention to the conversation carried on between Mr. E. C. Wilson, Mr. Robert E. Bole and Mr. Willard at this shipping desk, had you? A. No, not in their talk there. I was outside of their conversation altogether. Q. 215. And it is

your recollection almost immediately after Mr. Wilson turned from the shipping desk with this sketch in his hand and made this remark and Mr. Bole made this answer, which you have quoted in your testimony, the three parties, Mr. E. C. Wilson, Mr. Robert E. Bole and Mr. A. G. Willard, left that part of the shop and went into the office of the shop? A. I couldn't say whether they went into the office or not. They may have moved away from there and they may have gone into the office, but I really don't know. Q. Well, it is your recollection that they did not remain there around the shipping desk or in that part of the shop after that conversation to [228— 170] which you have testified? A. I really don't know. Q. Do you know whether it was Mr. Robert E. Bole or Mr. Wilson that made the sketch which he had in his hand when he turned away from the desk? A. I do not." You gave that testimony in that deposition? A. Yes, sir.

Q. And that is true, according to your best recollection then and now, is it? A. Yes, sir.

Q. "Q. 229. Did you ever hear any of the other boys say anything about it that you can remember?" That is, referring to the single-piece key and its arrangement in the Wilson under-reamer. "A. I have heard Mr. Bole say that he had devised the key quite a long time ago. Q. 230. Did he tell you at that time that some considerable time before they started to try out this key in a Wilson under-reamer he had sent in an order for a Wilson under-reamer from the north and made a sketch of single-piece key and slot-

ted tee, such reamer to be sent to the Sunset-Monarch Oil Company at McKittrick? A. I don't remember whether Mr. Bole ever told me that." Did you give that testimony? A. Yes, sir.

- Q. "Q. 234. Are you able to state positively without any reservation, as to the number of sketches Mr. E. C. Wilson had in his hand at the time of this conference? A. He only had one that I saw." You gave that testimony, did you? A. Yes, sir.
- Q. And that was true and correct, according to your recollection? A. Yes, sir.
- Q. And that is your recollection at the present time? A. Yes, sir.
- Q. And what time of the day was it, according to your recollection, that this conversation to which we have been referring took place in that shop? [229—171]
- A. I cannot recall now whether it was in the forenoon or afternoon. I believe I testified there that it was in the forenoon.
- Q. You testified there that it was sometime between ten in the morning and two in the afternoon, didn't you?
 - A. That is my recollection then and now.
- Q. Then, if I understand you correctly, Mr. Wilcox, you now wish to testify that you never did know and do not now know whether Mr. E. C. Wilson or Mr. Robert E. Bole made this sketch that Mr. Wilson had in his hand when they turned away from the desk and made this remark you have referred to?
 - A. I don't know who made the sketch.

Q. You had observed Mr. A. G. Willard and Mr. E. C. Wilson and Mr. Robert E. Bole bending over this shipping desk and talking there prior to their turning away from the shipping desk with this sketch, had you? I said "observed" and not "heard."

A. Yes, sir, I seen them standing there at that desk.

Q. And it is your recollection that both Mr. Bole and Mr. Wilson had pencils in their hands at that desk at that time and when Mr. Wilson stepped back away from the desk with this sketch in his hand? Is that correct?

A. I am not positive that Mr. Bole had a pencil in his hand. It is possible that he had. I will not say that he did not have, and I will not say that he did, but I am positive that Mr. Wilson had a pencil in his hand, as he tapped the paper something like that (illustrating) with his pencil.

Q. I have read you already your testimony in the interference case, that it was your then recollection that both of them had pencils in their hands. Do you wish to change that statement now?

The COURT.—You had better read that to him again.

Q. (By Mr. LYON.) "Q. 141." I will read it. "Do you remember how Mr. Wilson held the sketch, or what he did with it? A. Well, [230—172] when I first saw the sketch they were all there. I believe Mr. Bole and Mr. Wilson had pencils in their hands, working there, and they kind of turned away

from the desk and possibly moved a step away from the desk. Mr. Wilson held the sketch in his hand, and said, 'I know how to get it in but I don't know how to get it out.' "Do you wish to change that testimony now according to your present recollection?

A. To my best recollection, your Honor, Mr. Wilson had a pencil in his hand; but I don't want to be positive in regard to Mr. Bole. I half way believe that Mr. Bole had a pencil in his hand, but I won't be positive about it.

The COURT.—That is all. Go to something else.

- Q. (By Mr. LYON.) Mr. Wilcox, what have been your relations with E. C. Wilson and the Wilson & Willard Manufacturing Company in their several controversies with Mr. Edward Double, one of the part owners of the Bole patent in suit, and the Union Tool Company? Is it a fact that you have an interest in pending litigation between them and such interest is that of the Wilson & Willard Manufacturing Company, and I refer particularly to the rotary suits and the rotary patents. A. Absolutely not.
- Q. And at what time did you part with that interest? A. A year ago last December.
- Q. And you are alleged to be one of the joint inventors with Mr. A. G. Willard of the subject matter of such rotary litigation, are you?

Mr. BLAKESLEE.—We object to that as immaterial. We will stipulate that there is a suit pending under a patent and that Mr. Wilcox is one of the inventors of it, but he has no interest in it.

A. Yes, sir.

Q. (By Mr. LYON.) And at the time that you gave this testimony in this interference proceeding there was still remaining unpaid to you a large sum of money for the transfer of your alleged rights in such rotary patents to the Wilson interests, was there? [231—173]

Mr. BLAKESLEE.—Objected to as immaterial.

The COURT.—It seems to me that would be material if he had an interest at the time he gave that testimony, although he has not got that interest now.

Mr. LYON.—I want to show you that he was interested to give the most favorable testimony that he could at that time.

The COURT.—The objection is overruled.

A. What is the question?

The COURT.—The question is, did you have any financial interest in the controversy by reason of money being due at the time you gave your testimony in the interference suit.

- A. There was not a dollar due me when I gave that testimony.
- Q. (By Mr. LYON.) But there was money owing to you from the Wilsons at that time on account of the rotary?
 - A. A fractional part of the whole sum.
 - Q. (By the COURT.) How much?
 - A. A matter of \$500, I believe.
 - Q. (By Mr. LYON.) Is that all?
 - A. Yes, sir, I believe so.
- Q. (By Mr. BLAKESLEE.) That was not an interest in the litigation, was it, Mr. Wilcox? You

had simply sold out your interest in that patent? Isn't that it? A. Yes, sir.

- Q. You had no interest in the litigation at any time? A. Absolutely none.
- Q. (By Mr. LYON.) I want to ask you if the testimony that I read you that you gave in the interference, that no changes whatever were made in this sketch which Mr. Wilson had in his hand when he turned away from the shipping desk, were made after he turned away from the desk, is now your present recollection?

The COURT.—I don't understand that question.

Q. (By Mr. LYON.) In other words, is it still your present [232—174] recollection of those occurrences that no changes whatever were made in that sketch after Mr. Wilson turned away from the shipping desk?

A. No, sir; I made as near as I could from memory an absolute outline sketch of what I saw in Mr. Wilson's hand.

Q. I am not speaking of your sketch. You said Wilson had a sketch in his hand when he turned away from the shipping desk. Now, did he make any changes in that sketch after he turned away from the desk and before leaving that part of the shop?

A. Not to my knowledge, he did not.

Mr. LYON.—That is all.

Redirect Examination.

(By Mr. BLAKESLEE.)

Q. When was it that you heard Robert E. Bole assert something to the effect that he had had some-

thing to do with devising this single-piece key?

- A. Well, it was something along close to a year afterwards, I believe. After the reamer was quite extensively used through the different fields and was giving good satisfaction, I heard Mr. Bole make the remark that he had devised that key.
- Q. That was sometime in the year 1912 then, was it?
- A. That would be, yes, some time along about the first of 1912.
- Q. Before this occurrence in which the discussion took place as to the prying out of this single-piece key, had Mr. Bole ever exhibited or described to you any such single-piece key as we are having under discussion at this time?
- Mr. LYON.—Objected to as leading, calling for a conclusion of the witness, incompetent, and not redirect examination.

(Discussion.)

- Q. (By the COURT.) Did Mr. Bole ever show you any mechanical [233—175] device like this one in suit? A. No, sir.
 - Q. Or any drawing of any such thing?

A. No, sir.

Mr. BLAKESLEE.—That is all I want. Q. At the time Mr. Wilson and Mr. Bole and Mr. Willard, as you say, turned away from the desk at the shop, and you saw this sketch of the single-piece key, and heard the statements of Mr. Wilson and Mr. Bole pertinent to prying out the key, did or did not Mr. Bole have any sketch in his hand or hold it in any

way so that you could see it?

Mr. LYON.—That is objected to as leading.

The COURT.—I will let him answer the question.

A. No, sir.

Mr. BLAKESLEE.—That is all.

The COURT.—I think, Mr. Blakeslee, you ought to confine yourself to proving affirmatives. Proving a negative does not establish anything.

Mr. BLAKESLEE.—That is proper excepting under circumstances of this sort where it is to be assumed that certain things would have been done had there been the possibility through existence of certain things.

The COURT.—All right, proceed. Is that all with this witness?

Mr. LYONS.—No recross. [234—176]

Mr. BLAKESLEE.—At this juncture we wish to offer in evidence a certified copy of the file-wrapper, contents and drawing in the matter of the application of Elihu C. Wilson for improvement in underreamers, being the application involved in the Interference referred to in the other certified copy offered in evidence, being the records of the Patent Office, as Defendants' Exhibit 10.

Mr. LYON.—We don't object to any portion of said exhibit as includes the certificate of the date of the filing of this application, or the application as filed; but we object to all of such record as is contained in any of the papers attached to such exhibit subsequent to and including the paper under date of May 5, 1913, on the ground that the same are incom-

petent, irrelevant and immaterial for any purpose in this litigation. And I will state that such papers refer simply to subsequent actions by the Patent Office in their examination of the Wilson application and rejection of certain claims, and certain amendments to the application after it was filed, and to the insertion of the claims of the Bole patent for the purpose of interference, and the declaration of interference—my position being that any of those questions and papers are immaterial here, the whole object, so far as I can see, as material to this action of this patent being to prove that Wilson filed an application for a patent on this device at the time set forth in the certificate.

Mr. BLAKESLEE.—We contend that any showing of the files of an application is proper to be before the Court—not that we need rely on all those several separate papers, but that it is proper to be before the Court as disclosing the nature of that application.

The COURT.—I will overrule the objection.

Mr. BLAKESLEE.—In that connection, I call your Honor's attention to the drawing, the last paper, which will be found to agree in detail with the drawing of the patent in suit. [235—177]

Mr. LYON.—In order to have all the matter at one place in the record, I desire at this time to move to strike from the record and exclude from consideration Defendants' Exhibit 3, being the other certificate produced here, on the ground that the same is incompetent, not the best evidence, no foundation

laid for the introduction of secondary evidence, incompetent and immaterial to any of the issues of this case.

The COURT.—(After discussion.) Suppose you hold these papers and defer their offer until the other papers come from the Patent Office.

Mr. BLAKESLEE.—Very well, if your Honor please. [236—178]

[Testimony of W. W. Wilson, for Defendants.]

W. W. WILSON, called on behalf of the defendants, being first duly sworn, testified as follows:

Direct Examination.

(By Mr. BLAKESLEE.)

- Q. Please state your full name, age, residence and occupation, Mr. Wilson?
- A. William Webster Wilson. Age, thirty-two. Residence, 1339 Fifth Avenue, Los Angeles, California. Occupation, Vice-president of the Wilson & Willard Manufacturing Company.
- Q. How long have you been connected with the company?
- A. Since August or September of 1908—August of 1908.
- Q. What has been the nature of your duties with that company during that time from the beginning?
- A. My first work there, in the summer—in July or August of 1908—was in spending a little time in repairing Mr. A. G. Willard's automobile.

The COURT.—Now, that is so trival, Mr. Blakes-lee—

Q. (By Mr. BLAKESLEE.) All I care to know or to have is a brief statement of the nature of your services, the kind of work you did; that is, what relation you bore to the business?

A. Later on, as bookkeeper and in charge of the office routine; and later on, as superintendent of the shop; and in 1913 I was placed in as vice-president of the company.

Q. When did the Wilson & Willard Manufacturing Company first standardize, or put generally on the market, the present type of under-reamer they are manufacturing, namely, the reamer with the single-piece key?

Mr. LYON.—I think that has all been gone over.

The COURT.—Do you think it is necessary to go into that question any more, Mr. Blakeslee?

Mr. BLAKESLEE.—Possibly not. It is leading up to something else—the beginnings of his knowledge of it. [237—179]

The COURT.—Well—

A. In May, 1911.

Q. (By Mr. BLAKESLEE.) When was work commenced upon the first of these Wilson underreamers?

Mr. LYON.—Objected to that as incompetent, no foundation laid, the witness not having qualified to answer the question.

The COURT.—He can say whether he knows or not.

Q. (By Mr. BLAKESLEE.) If you know.

A. The work was commenced on the first one of

these reamers shortly after the conference in the Wilson & Willard Manufacturing Company's shop at which this key was discussed. That was in February of 1911.

- Q. How do you fix that time?
- A. From the order, which I have seen since, and also a letter, received from Mr. Williams, of the Pacific Iron Works at McKittrick.
- Q. Do you remember when that letter was received?
 - A. Yes, sir; it was received on January 30th.
 - Q. Is that the letter which you now have?
 - A. This is the letter.

Mr. BLAKESLEE.—Let the record show that the witness picks up "Defendant's Exhibit Pacific Iron Works Letter of January 28, 1911."

- Q. Did you see that letter when it came in?
- A. Yes, sir; Mr. E. C. Wilson showed it to me shortly after he opened it.
- Q. When did you first hear anything about such a single-piece key? A. Of this exact type?
- Q. Of the general type that is built into the Wilson under-reamers as now made?
- A. The first time I saw a key of this exact type, or a sketch [238—180] or any representation, was at the conference, which I believe took place on February 2d or 3d, 1911.
 - Q. When did you first hear of such a key?
- A. When we received the order for an old style slotted tee bar from Mr. Williams, of McKittrick, my brother, Mr. E. C. Wilson, took the matter of en-

larging the tee bar in this type of reamer up with me, and at that time we mentioned the use of a single-piece key, but of different design from that shown at the conference on February 2d or 3d.

- Q. Is this the order that you refer to? (Paper shown to witness.) A. Yes, sir.
 - Q. As coming from the Pacific Iron Works?

A. Yes, sir.

Mr. BLAKESLEE.—Let it be shown in the record that the witness refers to Defendant's Exhibit 2.

Q. What, to your knowledge, did Mr. Wilson do in connection with reamer changes, if any, following the receipt of this letter from the Pacific Iron Works with this order?

Mr. LYON.—"With this order"?

Mr. BLAKESLEE.—And this order. I mean the two.

Mr. LYON.—Object to that question in the form which it is in, as involved, and as assuming facts not testified to by the witness, and leading. There is no testimony that following this letter E. C. Wilson did anything about reamer changes on that order.

The COURT.—Can't you ask another question, Mr. Blakeslee, and get right at it?

Mr. BLAKESLEE.—All right. Strike that out.

Q. You have testified something was shown to you or suggested to you by Mr. Wilson pertinent to a single-piece key at about the time this order was received from the Pacific Iron Works. Please tell us all that occurred, and the circumstances. [239—

A. On the receipt of this order from McKittrick from Mr. Williams, the matter was taken up with me by my brother in regard to—as to whether or not it was possible that the draughtsman who made up the drawings for the old two-piece key under-reamer were as strong as they could be made. We figured the matter out in connection with the under-reamers then in use in the shop, and found that a much larger hole could be bored in the body, which would make room for a larger diameter tee bar, in which the slot would not weaken so seriously as did the old style two-piece—as did the slot in the tee bar for the old style two-piece slotted key reamer—two-piece key reamer. We then went in on the drafting board that afternoon and figured out how big we could make these, and I figured up the area of the rod that we could put into the reamer, and subtracted from this the area which would be taken out by the slot, and found that the remaining area was greater than the cross-sectional area of the tee bar then in use. So that we found we could place a tee bar in that type with a form of ample strength. Mr. E. C. Wilson then stated that that would be the reamer to make, and we both agreed that that was the reamer to make in the future, because the trouble with the old slotted tee under-reamer was the fact that the tee bar broke, giving trouble. The key matter was talked over at that time, but only indefinitely. I believe I asked Mr. Wilson as to whether he would use the-

Mr. LYON.—We object, and move to strike the

statement from the record in which the witness says "I believe" and "I asked."

The COURT.—That goes to the weight of his testimony. I overrule the objection. Proceed.

A. (Continuing.) As I remember it, I asked Mr. Wilson whether or not he would use the same kind of a key he used in the old reamer; and he said no, he was going to get one up with a single piece. He thought it would not give the trouble of wedging against [240-182] the plug. Later on, I was going through the shop- No. The next day, I believe it was-the next day or the day following that—my brother stated that he intended to write Mr. Williams, at McKittrick, and find out his opinion as to whether a reamer using such a tee bar and such a key, which would be easily assembled and disassembled and not give the trouble that had been occasioned by the sticking of the plugs in the block and screw type—if he didn't think that that would overcome the prejudice which drillers seemed to have against the Wilson reamer. We found that drillers preferred the other type of under-reamer, although from our experience and in our observation we believe that more breakages occurred with the double under-reamer than with our under-reamer. We couldn't understand this, except from the fact that possibly the inconvenience of the plugs caused a prejudice on the part of the drillers or the men using these under-reamers. This letter was written to Mr. Williams at McKittrick, and on the 30th we

received a reply from Mr. Williams, in which he stated that—

Mr. LYON.—We object to the witness stating the reply.

The COURT.—Yes. That is improper testimony. Objection sustained.

A. (Continuing.) —received a reply from Mr. Williams at McKittrick, which said letter was received January 30th. Two or three days subsequent to that I was passing through the shop to the shipper's desk from the office to get some information in regard to a shipment, on material received in the shop, and I believe I stopped at-I stopped and talked with Mr. Knapp a few moments about some matter that I have forgotten. Then it came to my attention that Mr. Willard, Mr. Bole and Mr. E. C. Wilson and Mr. Wilcox were standing near one of the shapers, near the back shaper in the shop, looking at an under-reamer which was lying on the floor. And so I stepped up to the conference and saw there my [241—183] brother had a sketch on one piece of paper, or several sketches on two or three pieces of paper, showing different types of keys. He was explaining that the old— He did not want to use the old two-piece key, but that he had gotten up several different designs of key that could be used in this reamer. One of them was retained by a single plug, another countersunk type plug similar to that used on the old two-piece key under-reamer. Another consisted of a plain bar of iron with a bevel at one end, with a plug at each end of the key to

hold it in place. And the third one consisted of a bar of iron or straight piece of iron with one end beveled and the wings projecting down. These were hooks with a vertical side and an inclined side to them. He said that this one he could get into the reamer but he didn't see exactly how to get it out. And Mr. Bole stated, "Pry it out." I believe Mr. Wilcox stated, "Yes, pry it out." And the general concurrence of opinion at that time was agreed on that it could be pried out of the reamer. I asked if this key was loose in the body, and they said yes some one said yes. And then I asked if they didn't think that the inertia in the jar in this reamer when in use might cause the key to jump up out of place and become displaced in use. Some one said that undoubtedly the pressure of the spring was too great to permit that. The topic of conversation then took the form of a discussion of the methods of prying it out, and I stepped over to the shipper's desk and got my information and I believe returned back to the office. Subsequent to this an order was gotten out, which I saw at the time in the shop, to change over an old under-reamer we had there and put in this type of key and also the enlarged tee bar as we had figured out, and the work was begun on this order. This under-reamer was finished up in the shop in this manner and was later on sold to Norbeck & Nicholson Company and shipped to [242— 1847 South Dakota, I believe to Redfield. We never heard any objections to this under-reamer, or heard of it, particularly, since. It was paid for by

the Norbeck & Nicholson Company.

Q. (By Mr. BLAKESLEE.) Approximately when was it that reamer was shipped to that company?

Mr. LYON.—That is already proven, your Honor.

The COURT.—Is there any doubt about those dates?

Mr. BLAKESLEE.—I think probably not. Strike that out.

Q. You have referred to Mr. Wilcox as having said, at the time of this discussion as to prying out that key, that he suggested to pry it out. What have you to say further about that?

Mr. LYON.—We object to that as leading, and not the proper method of proof of a conversation. There isn't anything to show that the witness has not stated all that he remembers of the conversation.

The COURT.—I think probably you had better ask if he remembers anything further about it.

Q. (By Mr. BLAKESLEE.) Do you remember anything further with respect to Mr. Wilcox suggesting to pry out that key?

A. That was simply like a remark a person will make when an idea hits them and he simply agrees in the idea, and he simply said, "Yes; pry it out."

Q. (By the COURT.) Do you think Mr. Wilcox was the one that first made that suggestion?

A. No, sir. Mr. Bole was the first one that said, "Pry it out."

Q. You are sure that Mr. Wilcox was present at the time this occurred? A. Yes, sir.

Q. (By Mr. BLAKESLEE.) And where did this

discussion about prying out this single-piece key take place?

- A. It took place in the shop of the Wilson & Willard [243—185] Manufacturing Company, within eight or ten feet of the shaper furthest from the office in the shop.
 - Q. At which end of the shop?
 - A. The north end of the shop.
- Q. Was there a shipping desk at that end of the shop? A. Yes, sir.
- Q. How close to the shipping desk was this conference or talk?
- A. About eight or ten—about ten feet, I should say.
- Q. Do you remember anybody else being in the near vicinity at the time of this conference, and, if so, who?
- Mr. LYON.—That is a repetition. He has stated who was there.
- Q. (By Mr. BLAKESLEE.) Other than those mentioned, of course.
- A. The parties changed their positions as the conference went on, and different ones pointing to an under-reamer, and so forth. I can't remember exactly the relations of the parties as they were standing there.
- Q. Have you ever seen the sketch or sketches which you say your brother had at that time since that occurrence? A. No, sir.
- Q. Have you since that time attempted to reproduce the sketch which you say you saw your brother

have at that time, namely, the one as to which there was a discussion concerning prying it out, and, if so, under what circumstances?

- A. Yes, sir. I produced a sketch of this kind in the interference suit.
 - Q. Is this it? (Showing paper to witness.)
 - A. Yes, sir.
- Q. And what did you intend to show by that reproduction sketch?

A. This is, as I remember, the key that Mr. E. C. Wilson was explaining—the key sketch that Mr. Wilson was explaining at this [244—186] conference of February 2d or 3rd, 1911.

- Q. (By the COURT.) February what date?
- A. 2d or 3d, 1911.

Mr. BLAKESLEE.—We offer this reproduction sketch of the device in evidence, and ask that the same be marked "Defendant's Exhibit W. W. Wilson Key Reproduction Exhibit."

The COURT.—Let me see that. (Handed to Court.) Now, let me see the reproduction of Mr. Wilcox, please. (Handed to Court.)

Q. (By Mr. BLAKESLEE.) You have referred to the order that was made out for changing over an under-reamer, shortly after this conference in which the prying out of the single-piece key was discussed. Have you that order before you, or anything pertaining to it? This order, No. 6904, is the order that I refer to.

Mr. BLAKESLEE.—Let it appear that the witness refers particularly to the second sheet from the

bottom of Defendant's Exhibit No. 7, and also to the attached order slips, sketches, etc., and to the envelops bearing the order slips of order 6904 and 7056, being, respectively, in evidence as Defendant's Exhibits 6, 7 and 8.

Q. When did you first see that order and the particular slip thereof to which I have last referred, dated February 3, 1911?

Mr. LYON.—We don't controvert the question that that particular piece of paper was made out on the day that it is dated.

Mr. BLAKESLEE.—Very well.

Mr. LYON.—Now, what the witness' knowledge or recollection of it at the present time is, with reference to the paper, has not been shown, and I don't see as his testimony is material or competent, and there is no foundation laid showing that he has any recollection.

Mr. BLAKESLEE.—With the admission, we will withdraw the question. [245—187]

Q. What do you know as to the work performed in the shop of the Wilson & Willard Manufacturing Company in connection with this order 6094 and the associated order 7056?

A. This work was carried out in the shop of the company as requested on the order, this being to bore out the under-reamer body to the larger bore, make up a special spring and special tee bar to fit this under-reamer. This under-reamer was an old-style reamer and had to be remilled to take the new style of cutters, also.

Q. Do you know who had charge of this work?

Mr. LYON.—There is no controversy with regard to that—that Mr. Knapp was the foreman of the shop and he had charge of the work.

Mr. BLAKESLEE.—All right.

Q. Who else, to your knowledge, did any work on that reamer?

Mr. LYON.—I object to that, on the ground that it is incompetent, and no foundation laid.

The COURT.—I don't see that it makes any difference who worked on it.

Mr. BLAKESLEE.—I am going to follow that up by asking if he knows of any instructions other than given by Mr. Wilson.

Mr. LYON.—Another negative.

The COURT.—It seems to me like it is a negative.

Q. (By Mr. BLAKESLEE.) Do you know who gave all of the instructions for the execution of this order?

Mr. LYON.—That is incompetent, no foundation laid.

The COURT.—I think he has testified he gave them. Now, is there going to be any controversy about that?

Mr. BLAKESLEE.—That he gave an order. I want to know if there were any other instructions. Complainant will try to show some other instructions were given by somebody else. [246—188]

Q. (By the COURT.) Did your brother give all the orders in regard to the construction of this reamer? A. Yes, sir.

- Q. (By Mr. BLAKESLEE.) Did you see that reamer assembled, after the work on its various parts had been finished, with the key in place?
 - A. Yes, sir.
- Q. And did you see the reamer disassembled and the key removed after the parts had first been put together? A. Yes, sir.
 - Q. How was that done?
- A. I was sitting in the office one day and Mr. Knapp came into the office and got myself and Mr. E. C. Wilson and told us to come out into the shop and look at that reamer. He said we didn't need a lever to pry it out. So, we went out into the shop, and Mr. Houriet, who was working on the underreamer, had found that—and he did at that time put the under-reamer together, and then, with the tang of a file, drove it under one edge of the key and pried it up. He was then unable to pull the file out and leave that key with the prong sticking up on the edge or corner of the bore; and then he was able to drive the key out the other side. That is the way he dismantled the reamer at that time.
- Q. What lever did you refer to in your last answer as being not necessary to be used?
- A. The lever that was made on this order, for removing the key or prying it out.
- Q. Is this the same general conformation of lever as that one? A. Yes, sir.

Mr. BLAKESLEE.—Let it be shown in the record that the witness has been referring to Defendant's Exhibit 9.

Q. When did you first see such a lever at that shop?

The COURT.—I don't see any necessity of asking that. [247—189]

Mr. BLAKESLEE.—There will be a contention raised by the complainants that this was devised by one of the complainants.

The COURT.—That is not the device in controversy?

Mr. BLAKESLEE.—No, sir; but it will be attempted to be shown to this Court that such a lever was devised by the other side, and that that was very important in handling this tee.

The COURT.—All right.

- A. On that day. I think at that time.
- Q. (By the COURT.) Was that the first time you saw it? A. Yes, sir.
 - Q. (By Mr. BLAKESLEE.) This lever?
 - A. Yes, sir.
- Q. And do you know what its use was in the shop, or what it was made for?
- A. We had a lever similar to that previously which we had used to put in a slot in the side of the under-reamer body and pry the lock up into place so that we could put the screws in the side of the body so that the holes would match, so that the screw would fit into the block.
 - Q. How did that differ in design from this lever?
- A. Merely a sharpening of the point, as I remember.
 - Q. The same general contour?

A. The contour of the rest of it was the same.

Mr. BLAKESLEE.—We now offer in evidence this piece of metal as Defendants Exhibit 9.

The COURT.—I thought that was already in evidence.

Mr. BLAKESLEE.—No. It was only marked 9 for identification.

The COURT.—All right.

Q. (By Mr. BLAKESLEE.) Can you state when it was that this key-removing operation took place by the assistance of Mr. Houriet with the file end? [248—190]

A. It was some time prior to the completion of this under-reamer, due to the fact that we found the spring was weak and also there was some other changes in the fit of the tee bar, I believe, which were made subsequent to that. We also made three springs, instead of one, changing the shape of it and size of the spring steel so as to give more strength.

Q. Can you state when the several parts of this reamer 120 as reshaped and redesigned, and provided for organization including the single-piece key, were completed so that such reassemblage was possible?

Mr. LYON.—I object to that, on the ground that it is incompetent, the witness not having qualified to answer the question.

I would like to ask the witness this question—if he has any recollection of those dates independently of these time-sheets?

A. I have the sequence of events in my mind. The

only way I could establish the actual dates, as to whether it was prior to this event or subsequent to some event is by locating the date from these sheets.

Q. (By Mr. BLAKESLEE.) In other words, you associate these things with other things that you knew about? Is that it?

A. Yes, sir.

Adjourned until 2 o'clock P. M. [249—191]

Thursday, March 25, 1915, 2 o'clock P. M.

W. W. WILSON, recalled.

Direct Examination (Resumed).

(By Mr. BLAKESLEE.)

- Q. Can you state, Mr. Wilson, when reamer 120 was first assembled with the single-piece key?
- A. Somewhere very soon after; about the same day the last work was done on the tee bar.
 - Q. When was that, if you know?
 - A. I couldn't tell, without referring to the cards.
- Q.(By Mr. LYON.) You have no recollection of the date or of that particular work except as given on these cards, have you?
 - A. No, sir.
- Q. (By Mr. BLAKESLEE.) After the reamer was first assembled and prior to its shipment to the Norbeck & Nicholson Company, what do you know of its history?
- A. It was assembled and disassembled a good many times, first in the blacksmith-shop; there were several changes made on it in different parts of it, particularly did they have trouble with the spring due to the fact that we had increased the diameter of the spring

and we had to make the spring of heavier stock to get the same strength on the cutters, and I remember three distinct springs were made for the reamer. And other changes and fitting was done to the reamer that I am unable to remember right now as to what they were, prior to the time the reamer was completed. It then stood on a pair of horses in the blacksmith-shop where parties coming into the shop interested in under-reamers were taken to the blacksmith-shop, and it was taken apart and shown them —taken apart and [250—192] assembled again to show them the construction and ease of assembling and disassembling—and where it remained until just prior to its sale; and, as I remember, it was tempered then prior to its shipment, when it was sent to the Norbeck & Nicholson Company.

- Q. How long have you known Mr. Bole, the complainant?
- A. Since 1904 or five when he was working in the Bakersfield Iron Works.
- Q. Were the 2-piece key reamers manufactured there at that time to your knowledge?
- A. They were manufactured at the Bakersfield Iron Works in either 1906 or 1907, or both.
- Q. I show you "Defendant's Exhibit Photo 'A' of Wilson Reamer, 2-piece Key Device," and "Defendant's Exhibit Photo 'B' of 2-piece Key Device," and ask you whether or not those typify the general construction of the—

The COURT.—I understand that plaintiff has admitted those photographs as correct photographs.

Mr. LYON.—Yes, we do not question that.

The COURT.—I don't see the necessity of taking up the time of the Court with that.

Mr. BLAKESLEE.—I simply wish to show that Mr. Bole knew of the construction at that time.

Mr. LYON.—You have already proven that, and it is admitted.

Q. (By Mr. BLAKESLEE.) Do you know whether or not Mr. Bole was familiar with the type of 2-piece key construction at the Bakersfield shop?

A. He worked at the shop at the time it was constructed there. As to actually whether he was acquainted with it or not, I am unable to state.

Q. Was Mr. Bole at the shop of the Wilson & Willard Manufacturing Company, the defendant, during the years 1911 and 1912?

A. Yes, sir. [251—193]

Q. How much of the time was he in attendance at that shop?

A. He was in attendance almost every day except when he was out of the city. At least two or three hours of the day. And part of the time or a good deal of the time he was there all the time. That is, during the working hours of the day.

Q. To what parts of the premises did he have access? A. To all parts.

Q. Including the office as well as the shop?

Mr. LYON.—What is the object of that line of testimony? We can probably stipulate it. I want to save time here.

Mr. BLAKESLEE.—The object is to show that he

was in close touch with all the business of that company.

The COURT.—Bole was?

Mr. BLAKESLEE.—Bole was. That Bole was in close touch and had access to the office and all its files and papers, and was in close personal relation with all the officers of that company.

The COURT.—Do you stipulate that is a fact?

Mr. LYON.—Yes.

The COURT.—Then proceed with something else.

Mr. LYON.—That is, during 1911.

Mr. BLAKESLEE.—And during 1912.

Mr. LYON.—Not all of 1912, no.

Mr. BLAKESLEE.—How much of the time do you wish to except in 1912?

Mr. LYON.—He was in and out through the shop up to the latter part of 1912, anyway, and probably all of it, but I will not stipulate that he had any access to their general office files, if that is what counsel intends. So far as what they were doing along the line of building devices, he had full, free access to all of the shop, being part of the shop and running one department of it.

Mr. BLAKESLEE.—Then I wish to examine the witness as to [252—194] whether he had access to the files such as those which pertain to the shop orders.

- Q. (By the COURT.) Was Mr. Wilson in charge of those files?
 - Q. (By Mr. BLAKESLEE.) You were in charge

(Testimony of W. W. Wilson.) of the office generally at that time?

- A. Yes, sir.
- Q. What can you say as to Mr. Bole's access to the files of shop orders, records and the like, during those years?
- A. No restraint was exerted on Mr. Bole in regard to that. He had free access to all the files, if he wanted to look at them.
- Mr. LYON.—I move to strike out the answer from the record as being a conclusion. It don't state what he had, but simply shows what he was not prohibited from having.

The COURT.—I will deny the motion.

- Q. (By Mr. BLAKESLEE.) Was there any particular line of work that Mr. Bole was interested in in the shop during those years?
- A. Yes, sir; he was having his Bole pumps manufactured there.
- Q. And when did that work come to an end there? Mr. LYON.—That has already been proven. There is no contest about that.
- Mr. BLAKESLEE.—I wish to lay a foundation for the settlement of their affairs, and the attendant circumstances which the witness E. C. Wilson testified about.
- Mr. LYON.—I understand that the only reason for admitting any portion of that was simply as such alleged conversations might point to what was said at that time to indicate any statement that either of the parties made as to who was the inventor, and the Court has ruled that the defendant cannot change,

alter, vary or modify the terms of the written agreement, or attack that collaterally by contemporaneous parol agreement.

The COURT.—What have you to say about that, Mr. Blakeslee? [253—195]

(Discussion.)

The COURT.—Ask him what conversation he heard. Tell what conversation you heard between Mr. Bole and Mr. Wilson.

Mr. BLAKESLEE.—I was simply fixing the time, was all.

- A. The pump business came to an end sometime in January, 1913, when at attachment was placed on the Bole Pump Company's account and business and material. This attachment was released by a session at the Wilson & Willard Manufacturing Company's shop on the morning of February 1, 1913.
- Q. At that time was there any conversation in which you participated concerning this single-piece key matter? A. Yes, sir.
- Q. Please repeat such conversation in as nearly the words thereof as you can give it.

Mr. LYON.—That the record may be clear, I have stated my understanding of the ruling of the Court, and I don't care to encumber the record with an objection, if my understanding of the ruling of the Court is correct that that conversation is not admitted for the purpose of showing any contemporations or all agreement, but solely to get the words of the conversation for any bearing it may have upon the question of who was the inventor—

The COURT.—That is the ruling of the Court. Go ahead and state the conversation.

A. There was an argument over the different points in regard to the manner of settling up the account, and having in mind a certain letter received during the month of January, 1913, by Mr. E. C. Wilson or the Wilson & Willard Manufacturing Company. I was sitting at my desk in our office there, and my brother was sitting at the desk across the room and I turned to him and said, "Clem, how about this key proposition?" [254—196]

The COURT.—Who is Clem?

A. My brother, E. C. Wilson.

The COURT.—All right; go ahead.

A. He turned to Mr. Bole and said, "Yes, Bob, how about that key matter?

Q. (By the COURT.) Is Mr. Bole's name Bob?

A. Yes, sir.

The COURT.—All right.

A. Mr. Bole said, "You needn't worry about that; I will do nothing further with it." And Mr. Wilson says, "We will remember that."

Q.(By the COURT.) Had this writing been signed at that time?

A. No, sir.

Q. Had it been dictated?

A. At least part of it had been dictated. I am not certain whether all of it had been dictated, or not.

Q. Had it been read over by the parties?

A. I think they were reading it at the time.

The COURT.—Go ahead, Mr. Blakeslee.

Mr. BLAKESLEE.—I believe your Honor has intimated that questions directed at determining whether or not witnesses had received any information of this key from Bole or not, is tending to establish negative proof. I wish to ask one further question along that line, if your Honor will permit. Our contention is that when these parties were so closely related to daily attendance in the shop, it is competent to show whether or not there had been any putting of this information up by anybody in connection with Mr. Wilson as to Mr. Bole's claim of having produced this thing before, or contention that he had before. And it is proper to show that in connection with establishing the surrounding circumstances.

The COURT.—I don't think so.

Mr. BLAKESLEE.—In an inquiry of this sort?

The COURT.—No. [255—197]

Mr. BLAKESLEE.—Doesn't it tend to show the probability or improbability of any claim as to origination by Bole?

The COURT.—No.

Mr. BLAKESLEE.—We wish to make that proof, if we might, and we have other witnesses whom we will call along that line, unless your Honor rules—

The COURT.—I have ruled that it will have no effect on the Court. If you brought in everybody in Los Angeles and they testified that they never heard Mr. Bole say anything about it, that is negative testimony that does not amount to anything. I illustrated it in my reference to bringing in witnesses to

testify that they never saw a man shoot another one. That would not be evidence that another person did not shoot him.

Mr. BLAKESLEE.—But we don't intend to go outside the shop of the Wilson & Willard Manufacturing Company and take in scattering citizens throughout the city. Our intention is to show merely as to those persons in daily contact with Bole and Wilson.

The COURT.—Do you object to it, Mr. Lyon? Mr. LYON.—Certainly.

The COURT.—All right. The objection is sustained.

Cross-examination.

(By Mr. LYON.)

- Q. You testified in the interference proceeding No. 37,126, did you, in behalf of your brother, E. C. Wilson? A. Yes, sir.
- Q. I call your attention to question 400 asked you on cross-examination, which question is as follows:

The COURT.—Let the witness see it.

Mr. LYON.—I have it in front of him. "Q. 400. You have referred to a settlement with Mr. Bole by the Wilson & Willard Manufacturing Company on or about February 1, 1913. Was such settlement in writing? A. Not to my knowledge. A receipt was given [256—198] to Mr. Bole for a payment which he made at that time."

- A. Yes, sir; that was my testimony at that time.
- Q. That was your recollection of the facts at the time of giving that testimony, was it? You may ex-

(Testimony of W. W. Wilson.) plain afterwards. A. Yes, sir.

- Q. And you were afterwards confronted with the contract of February 1, 1913, and asked if your signature was appended thereto as a witness?
 - A. Yes, sir.
- Q. In your testimony in said interference were you asked the following question and did you give the following answer: "Q. 291. Is there any way in which you can fix this date definitely?" That is, when the under-reamer No. 120 was first reassembled with the 1-piece key therein.

The COURT.—Is that part of the question?

Mr. LYON.—No, that is an interpolation, and the witness may look at the record to see whether that is the subject of the question. Your answer was, "This reamer was probably first assembled in the early part of March, from my inspection of the time-cards, but I am not able to definitely settle this point."

- A. Yes, sir; that was my answer.
- Q. And that was your recollection at the time of giving that deposition on June 22, 1914, was it?
 - A. Yes, sir.
- Q. Were you asked the following questions and did you give the following answers in that deposition: "Q. 346. Were you present at the commencement of this conference between Mr. E. C. Wilson, Mr. A. G. Willard, Mr. C. E Wilcox, to which you have last referred? A. I don't know that I was. I came along after the conference was started. I don't know whether that was the first of it or not. Q. 347. Are we to understand from your testimony that the

joining of you into such conference was by accident as [257—199] you happened to pass:through the shop? A. I believe so. I was not invited into the conference."

A. That was my testimony; yes, sir.

Q. Now, referring to this sketch that you stated Mr. Wilson had in his hand at the time that Mr. E. C. Wilson, Mr. A. G. Willard and Mr. Robert E. Bole and Mr C. E. Wilcox were standing over this reamer, in relation to that sketch, were you asked the following question and did you give the following answer on such deposition: "Q. 367. This sketch was not made while you were present at that conference, was it? A. I believe the sketch was partially made, or a sketch was made during the conference, alterations were made in the sketch by Mr. Wilson."

A. Yes, sir; that is my testimony.

Q. "Q. 368. What part of it? A. Certain alterations were made in the sketch by Mr. Wilson. Q. 369. What alterations? Describe them. A. Alterations in the shape of the downward projection of the key. Q. 370. What did the sketch show prior to these alterations in regard to the downward projection of the key? Please describe the formation. A. As I remember the key sketch, first it showed simply a hook projecting downward, similar to the hook on the lower piece of key in the old 2-piece key type. To this another hook was added and the shape of these hooks was altered. Q. 371. When was the second hook added to this sketch? A. During the conversation, prior to the remarks, as I remember it,

or during the remarks of Mr. Wilson, that he could hold the key in place by means of these, and that he could get it into the under-reamer, but that he didn't know how to get it out exactly. Q. 372. And who was present while those alterations were being made in that sketch? A. Mr. E. C. Wilson, Mr. A. G. Willard, Mr. R. E Bole, myself, and C. E. Wilcox, and I believe Mr. William G. Knapp. I am not certain as to Mr. Knapp.'' Is that correct?

- A. Yes, sir. [258—200]
- Q. That is a correct statement of your testimony as given in that deposition at that time?
 - A. Yes, sir.
- Q. Referring still to this sketch that we have been discussing, did you in that deposition also testify as follows in answer to question 394, referring to your brother: "Did he have more than one piece of paper in his hand at that time? A. No, sir.
- Q. Are you sure it was not a piece of tracing paper that he had in his hand at that time?
- A. No, sir; because he was sketching on it with a lead pencil."
 - A. No; with a pencil.
- Q. "—with a pencil." Leave out the lead. "Q. 396. Was there more than one sketch of a key on this piece of paper at the time that you joined this conversation and saw Mr. Willard and Mr. Wilcox and Mr. E. C. Wilson and Mr. Bole bending over the under-reamer body? A. Yes, sir; there were two or three or four sketches of different shapes of keys, as I remember. However, the conversation was more

particularly directed at one." Is that a correct statement of your testimony as given at that time?

- A. Yes, sir.
- Q. When you gave your deposition in this interference proceeding, did you then recollect who it was or when it was that it was discovered that this single-piece key could be removed from reamer No. 120 as reassembled, by driving under such key the tang end of a file?
- A. Yes, sir; I think I remember it, and I believe I testified so in that case.
 - Q. Did you name the man?
- A. I don't remember whether I did or not. I could have.
- Q. Please tell us again when it was that this man Houriet made that discovery.
- A. It was very shortly after the under-reamer was assembled [259—201] the first time. That is, I think—I don't believe I saw him assemble that or disassemble it the first time or so. It was only two or three or four days, or something like that, after the under-reamer was completed, or ready to assemble the first time, that we were called out to that conference. That is the first I knew about it.
- Q. According to your present recollection, when would that have made the date of such occurrence?
 - A. The early part of March, 1911.
- Q. When you say the early part of March, would you say it was prior or subsequent to the 8th day of March, 1911, that this discovery was made by Mr. Houriet?

 A. I am unable to state.

- Q. You have been in the courtroom all of the time during the taking of the testimony of your brother E. C. Wilson in this case, haven't you?
 - A. I believe so; yes, sir.
- Q. You heard his testimony that it was two or three weeks after the reamer was first assembled before Mr. Houriet made this discovery?
 - A. Yes, sir.
- Q. What have you to say as to how that corresponds with your present recollection of such fact? That may be argumentative, your Honor, but I want to give him a full opportunity to explain.
- A. It seems to me it was earlier than that. It was probably not more than a week after the reamer was first assembled.
- Q. (By the COURT.) What time do you fix as the date of final completion of this reamer 120, the assembling of it?
- A. The under-reamer was assembled a number of times. The final assembling of it was just prior to the shipping to Bakersfield.

The COURT.—I know. But I want the time that it was assembled. [260—202]

A. As near as I can fix that date it was the last few days of February or first of March, 1911.

Mr. LYON.—That is all.

Redirect Examination.

Mr. BLAKESLEE.—May I ask one more question of the witness which is not redirect?

The COURT.—Yes.

Q. (By Mr. BLAKESLEE.) I show you two

tracings and ask you if you know what they are.

A. Yes, sir.

Mr. LYON.—I think that matter has all been fully gone over and they are offered in evidence.

The COURT.—I suppose he wants to ask something about it.

Q. (By Mr. BLAKESLEE.) When did you first see these?

A. I believe I saw these tracings just after they were completed, if not while in the process of being traced.

Mr. LYON.—I move to strike the answer from the record and exclude it from consideration on the ground that it is merely the guess or belief of the witness, and incompetent.

The COURT.—Overruled.

- Q. (By Mr. BLAKESLEE.) When was that?
- A. That was May 6, 1911.
- Q. (By the COURT.) Do you know anything about it excepting that date that is printed on there?
 - A. No, sir; nothing excepting the date.
- Q. (By Mr. BLAKESLEE.) And at the time you first saw that was this part marked "drive-key steel" on that tracing?

Mr. LYON.—Objected to as incompetent and no foundation laid.

A. Yes, sir.

Mr. BLAKESLEE.—Let it be shown that the witness has just referred [261—203] to "Defendant's Exhibit 4" and "Defendant's Exhibit 5."

Mr. BLAKESLEE.—That is all. [262—204]

[Testimony of A. G. Willard, for Defendants.]

A. G. WILLARD, a witness produced on behalf of defendants, being first duly sworn, testified as follows:

Direct Examination.

(By Mr. BLAKESLEE.)

- Q. Please state your full name, age, residence and occupation.
- A. My name is Arthur G. Willard; I live at 1246 West Thirty-seventh Place.
 - Q. Los Angeles?
- A. Los Angeles, California. I am at present engaged in the business of looking after my interests.
 - Q. Age? A. Age, forty-four years.
- Q. You have been at one time interested in the defendant corporation of the Wilson & Willard Manufacturing Company? A. Yes, sir.
 - Q. During what period of years?
 - A. From July, 1907, to April 1, 1913.
- Q. Have you any interest in that corporation whatsoever at the present time? A. No, sir.
- Q. Are you acquainted with that type of Wilson under-reamer which is now being produced by that company, including the single-piece key for confining the lower end of the spring like "Defendant's Exhibit 1," before us here? A. Yes, sir.
- Q. When did the Wilson & Willard Manufacturing Company make the first of such reamers to your knowledge?
 - A. Sometime in the early part of 1911.

- Q. When did you first hear of such a single-piece key? A. About the same time.
 - Q. Under what circumstances? [263—205]
- A. The key was manufactured in the shop of the Wilson & Willard Manufacturing Company.
- Q. Were any other changes made in the Wilson under-reamer at that time?
- A. The tee bar was made a little larger and heavier.
- Q. Can you fix in any manner the time and tell us the circumstances under which such tee bar changes were made?
- A. About the time we received a letter from a man named Williams at McKittrick.
 - Q. Is the letter before you?
 - A. Yes, sir; this is it.
- Q. Did you see this letter when it came into the shop?
- A. I saw the letter after it came into the shop; yes, sir.
 - Q. How soon after?
 - A. Possibly the same afternoon or the next day.
- Mr. BLAKESLEE.—Let it be shown that the witness has just selected "Defendant's Exhibit Pacific Iron Works Letter of January 28, 1911."
- Q. Can you tell us anything further as to anything that occurred in connection with such modification of the Wilson reamer at about the time that this letter came in?
- A. Why, Mr. Wilson called my attention to the fact that Williams had ordered an old-style tee bar,

and to the best of my recollection Mr. Wilson said at the time, "Is it possible that one of those old tee bars is in use, and can it be possible to make the old style tee bar heavier?" or words to that effect.

- Q. Was anything done by Mr. Wilson at that time in connection with changing over this tee bar, and, if so, what?
- A. Mr. Wilson started to work immediately sketching out an extra heavy tee bar.
 - Q. Where did he do this?
- A. On the draughting board in the office. [264—206]
- Q. Did anybody assist him in that work or advise him? A. I can't say.
- Q. Did you see him doing this draughting-board work?
 - A. I was there part of the time; yes, sir.
- Q. How soon after that was it that you first heard of this single-piece key?

Mr. LYON.—We object to that on the ground that it is leading and assumes facts not testified to by the witness, that it was after that that he first heard of the key.

The COURT.—The objection is overruled. I don't understand it that way.

Mr. LYON.—The witness has not stated that that was the first time that he heard of that key.

(The question is read.)

The COURT.—After what do you mean?

Mr. BLAKESLEE.—After the time of this draughting-board work.

The COURT.—I think that is all right. He may have heard of that before, but he asks when was the first time he heard of that after that time. The question is all right.

- A. Inside of the next thirty days, I would say.
- Q. (By Mr. BLAKESLEE.) Who first mentioned such single-piece key device to you, or put it up to you in any way?

 A. I don't remember.
- Q. And where did you first see such single-piece key device?
- A. In the shop of the Wilson & Willard Manufacturing Company.
- Q. Where did you first see any sketch or pictorial showing of any such single-piece key device?
- Mr. LYON.—Objected to on the ground that it is leading, and that the witness has not yet testified that he ever saw a sketch.

The COURT.—I will overrule the objection.

- A. I saw a blue-print of the single-piece key in the office of the Wilson & Willard Manufacturing Company. [265—207]
- Q. (By Mr. BLAKESLEE.) Had you ever seen any sketch or showing on paper of such key before? Mr. LYON.—Objected to as leading.
 - A. Not to my best recollection; no, sir.
- Q. (By Mr. BLAKESLEE.) And when was this that you say such blue-print?
 - A. In the early part of 1911.
- Q. At that time had you ever seen any written description of any such single-piece key device?

The COURT.—Now, Mr. Blakeslee, if you are in-

tending to prove a negative, I don't want you to do it. It has been ruled out.

Mr. BLAKESLEE.—I apologize. I contravened your ruling, but I did not mean to.

- Q. In what connection did you see such first showing on paper of the single-piece key device on the blue-print?
- A. I have no recollection of the time, except that I remember distinctly of seeing a blue-print with a single-piece key on it in the shop, or, rather, in the office of the shop.
- Q. And with relation to that time when was it that you first saw a Wilson reamer with such a single-piece key device?
- A. I cannot state positively. I may have seen the reamer along about the same time, and it is not clear in my mind at all.
- Q. And you are sure that that was after the first of 1911? A. Yes, sir.

Mr. BLAKESLEE.—That is all.

Cross-examination.

(By Mr. LYON.)

- Q. How long have you been acquainted with Mr. Robert E. Bole? A. A long time, Mr. Lyon.
 - Q. You knew him in the fall of 1908?
 - A. Yes, sir. [266—208]
 - Q. Where was he employed at that time?
- A. At the shop of the Wilson & Willard Manufacturing Company.
 - Q. At Los Angeles, California? A. Yes, sir.
 - Q. You were in charge of that shop at that time?

- A. Yes, sir.
- Q. Where was Mr. E. C. Wilson at that time?
- A. He was living at Bakersfield, California.
- Q. In September, 1908, Mr. Bole went north to Maricopa, California, the oil fields, did he?
 - A. Yes, sir.

Mr. BLAKESLEE.—Objected to as not cross-examination. It is immaterial.

The COURT.—It seems to me it is not in the line of cross-examination.

Mr. BLAKESLEE.—Counsel is trying to make out his case in rebuttal.

Mr. LYON.—I want to show the contradictory character of this witness, and also he has stated that the first time that he heard of this key was in 1911. I want to show before I get through with him that he saw and heard of it in 1908.

The COURT.—Go ahead. With that explanation it is evident that it is perfectly proper.

- Q. (By Mr. LYON.) For what purpose did Mr. Bole go north in September, 1908?
- A. One of his trips he went north to take charge of the Sunset-Monarch shops.
- Q. He went up there along the 17th, 18th, 19th or 20th of September, 1908. Is that correct?
 - A. Somewheres around that time, I believe.
- Q. While he was up there he sent down an order to the Wilson & Willard Manufacturing Company for a 95/8 Wilson under-reamer [267—209] and a Bole casing spear, did he?
 - A. Yes, sir; and some Bole pumps.

- Q. That order was in writing? A. Yes, sir.
- Q. And in that written order there were suggested changes of the Wilson under-reamer, were there?
 - A. Yes, sir.
- Q. And the suggested changes referred to the key device for holding the tee bar or spring-actuated rod in place, did they?
 - A. Not to the best of my recollection.
- Q. Do you know what became of that written order? A. No, sir.
- Q. You testified in the interference proceeding No. 37126 on behalf of Mr. E. C. Wilson, did you?
 - A. Yes, sir.
- Q. I show you a copy of your testimony in that case—I think it is a signed copy, Mr. Willard—and I ask you to read the same and state whether or not it is a true copy of your testimony in that case. And you gave two depositions in that case, didn't you?

A. Yes, sir.

Mr. LYON.—I am going to offer the entire two depositions for impeachment purposes in this case, and I am not going to stop to read the testimony at the present time unless your Honor desires. I will read it in argument.

Mr. BLAKESLEE.—We don't object.

Mr. LYON.—Will you stipulate that that is a true copy of the testimony he gave?

Mr. BLAKESLEE.—I don't know what it is.

Mr. LYON.—It is a signed copy of the testimony given me by Mr. Benjamin. Anyway, you can read it over. [268—210]

The COURT.—How long is it?

Mr. BLAKESLEE.—Probably a hundred pages.

Mr. LYON.—No, about 50 pages of it.

The COURT.—If you want him to read it over you can have him take the time outside. There is no use taking up the time of the Court for him to read it over to see that this is his testimony.

Mr. BLAKESLEE.—We will agree to that, subject to correction in the event of any error.

The COURT.—Certified by Mr. Benjamin?

Mr. BLAKESLEE.—Yes, but this is not the original. We will take it subject to the stipulation that it is subject to correction.

Mr. LYON.—We will accept that. The reporters will copy into the record at this point the entire two depositions of Mr. Willard.

The depositions last referred to are as follows: [269—211]

[Deposition of Arthur G. Willard, for Defendants.]

ARTHUR G. WILLARD, a witness produced on behalf of the party Wilson, being first duly sworn, deposes as follows:

Direct Examination.

(By Mr. BLAKESLEE.)

Q. 1. Please state your full name, age, residence and occupation.

A. Arthur G. Willard; forty-three years of age; machinist by occupation; 1246 West Thirty-seventh Place, Los Angeles, California.

Q. 2. In what line of work are you at present busy? A. Building.

- Q. 3. What has been your activity during the last ten years, in what lines of work?
 - A. Manufacturing oil well tools.
- Q. 4. When did you commence to manufacture oil well tools? A. 1899.
- Q. 5. What was the name of the business you were running during those years, the name or names of the business you were running during those years?
- A. Baker Iron Works; Bakersfield Iron Works at Bakersfield; and the Wilson & Willard Manufacturing Company at Los Angeles, Cal.
- Q. 6. Did you have any interest in either of these concerns?
- A. Part owner in the Wilson & Willard Manufacturing Company.
- Q. 7. How long were you a part owner in that company? A. Between five and six years.
 - Q. 8. When was that company organized?
 - A. July, 1907.
 - Q. 9. When did it start business?
 - A. Some two or three months later.
 - Q. 10. At what place?
- A. At 1520 Santa Fe Avenue, Los Angeles, California. [270—212]
 - Q. 11. Is that concern still operating?
 - A. Yes, sir.
 - Q. 12. Where?
 - A. Fifteenth and Santa Fe Avenue.
- Q. 13. Has it always been operating in the City of Los Angeles, California, since it started up?
 - A. Yes, sir.

- Q. 14. What was your connection with the business of that company from time to time?
 - A. Vice-president and treasurer.
 - Q. 15. Did you always hold that office?
 - A. Yes, sir.
- Q. 16. What did you have to do, if anything, with the business of the concerns, so far as its management and the conduct was concerned?
 - A. I looked after the shop end of it, principally.
 - Q. 17. During what years?
- A. 1907 to—the latter part of 1907 to the first part of 1913.
- Q. 18. What was the general business of the Wilson & Willard Manufacturing Company during the time you were connected with it?
 - A. Manufacturing oil well tools.
- Q. 19. Please name such oil well tools, or a few of the principal ones.
- A. The Wilson under-reamer, the Wilson casing spear, the Wilson casing elevator, Bole pumps, Baker casing shoes, Schweitzer swivel sockets, Willard circulating-heads, and the Willard & Wilcox rotary drive.
- Q. 20. What significance does the name "Bole" bear in speaking of pumps?
 - A. The pump patented by R. E. Bole,
- Q. 21. Who is that R. E. Bole? Please identify him. [271—213]
- A. He is now conducting the business known as the Bole Pump Company on Santa Fe Avenue in Vernon.
 - Q. 22. How long have you known Mr. Bole?

- A. Eight or nine years.
- Q. 23. He is present in the room at this time?
- A. Yes, sir.
- Q. 24. A party to these proceedings?
- A. So I understand.
- Q. 25. You have spoken of the Wilson underreamer. What does the name "Wilson" mean in that connection?
- A. The under-reamer was patented by E. C. Wilson.
- Q. 26. He is a party to these proceedings and present in the room? A. Yes, sir.
 - Q. 27. How long have you known Mr. Wilson?
 - A. Oh, possibly fifteen years.
- Q. 28. What had his business been during the last few years?
- A. He was connected with the Baker Iron Works for a number of years, and left to take charge of the Bakersfield Iron Works at Bakersfield, California; and afterwards came to Los Angeles, California, with the Wilson & Willard Manufacturing Company.
- Q. 29. What was his office and what were his duties in connection with the Wilson & Willard Manufacturing Company?
- A. He was president of the Wilson & Willard Manufacturing Company and had charge of the office work, and general manager.
- Q. 30. During what period of time did he pursue these duties and occupy these offices?
 - A. 1908 up to the present time.
- Q. 31. Who else, if anyone, was associated with yourself and Mr. E. C. Wilson in the management and

(Deposition of Arthur G. Willard.) operation of the Wilson & Willard Manufacturing Company from the year 1907 or 1908 until the middle

of last year? [272—214]

A. No one as stockholder, excepting Mrs. Willard.

Q. 32. What other persons, if any, helped conduct that business?

A. Mr. W. W. Wilson was connected with the firm since 1908.

Q. 33. What were his general duties from time to time?

A. He had charge of the office work until the arrival of Mr. E. C. Wilson.

Q. 34. What year was that?

A. I think it was 1908.

Q. 35. What were Mr. W. W. Wilson's duties from that time on? A. Beg pardon?

Q. 36. During what years?

A. Part of 1908, 1909, 1910 and possibly part of 1911.

Q. 37. After that what were his duties in that business? A. Acted as superintendent.

Q. 38. Who was foreman of that shop for the last four or five years?

A. There were two different foremen, S. G. Topliff and W. G. Knapp.

Q. 39. Who was the day foreman?

A. S. G. Topliff was foreman during the daytime up until about three years ago, and then W. G. Knapp acted as day foreman.

Q. 40. Are you sure it was three years ago Mr.

Knapp became foreman or possibly four, or a little over four?

A. I am not sure as to the date.

Mr. LYON.—Objected to as leading and suggestive.

- Q. 41. (By Mr. BLAKESLEE.) Were the Wilson under-reamers part of the sole business of the Wilson & Willard Manufacturing Company?
 - A. They were part of it; yes, sir.
- Q. 42. Did they handle the entire accounts and divide the profits? A. No, sir. [273—215]
- Q. 43. What was the arrangement of the accounts and profit distribution on the Wilson under-reamer?
- A. Mr. E. C. Wilson was charged so much per hour for all work on the Wilson under-reamer, and the profits went to E. C. Wilson personally.
- Q. 44. Did any other person have any interest in the Wilson under-reamer account other than Mr. E. C. Wilson? A. No, sir.
- Q. 45. That covers the entire period of the existence of the Wilson & Willard Manufacturing Company? A. Yes, sir.
- Q. 46. Did the Wilson & Willard Manufacturing Company ever manufacture, directly or indirectly, any under-reamer for any account other than of Mr. E. C. Wilson? A. Yes, sir.

Q. 47. For whom?

A. One for A. G. Willard, and several for J. M. Kellerman.

Q. 48. For anybody else, if you remember?

A. Not that I remember.

Q. 49. When did the Wilson & Willard Manufacturing Company commence any work in connection with the Bole pumps?

A. I think it was the first of 1908.

Q. 50. What was the general arrangement as to the handling of this Bole pump business?

Mr. LYON.—Objected to as irrelevant and immaterial, and this objection may be taken as repeated to each and every question asked this witness in regard to such Bole pump business. It has no bearing whatever upon issues of priority of invention herein involved.

A. The Bole pump had been manufactured by R. E. Bole for some time at Bakersfield and Coalinga, and Mr. Bole removed to Los [274—216] Angeles, and I believed the pump was the best oil well pump that was being made at that time and I entered into an arrangement with Mr. Bole whereby the pump was to be manufactured by the Wilson & Willard Manufacturing Company.

Q. 51. (By Mr. BLAKESLEE.) How did you participate in this arrangement, if in any way, personally?

A. I made the arangement with Mr. Bole whereby I was to participate in the earnings of the pump.

Q. 52. How long did this business continue, namely this pump business, in connection with the business of the Wilson & Willard Manufacturing Company?

A. Until January or February, 1913.

Q. 53. 1908 it started? A. Yes, sir.

- Q. 54. During that time did Mr. Bole put in any of his time at the shop of the Wilson & Willard Manufacturing Company?
- A. During the years of 1908 and 1909, and possibly 1910, part of his time was for the Wilson & Willard Manufacturing Company.
- Q. 55. What was he doing for the company during those years?
 - A. Just whatever he was told to do.
 - Q. 56. He was an employee of the company?
 - A. Yes, sir.
 - Q. 57. Did machine work for the company?
 - A. Yes, he could, if he was told to.
 - Q. 58. Did so? A. Yes, sir.
- Q. 59. After those years did he perform services for the company?
- A. If he did, it was of his own free will. He was working for the Bole Pump Company.
- Q. 60. Did he put in much of his time after 1910 at the shop of the Wilson & Willard Manufacturing Company? [275—217] A. Yes, sir.
 - Q. 61. How frequently was he at the shop?
- A. He might be there every day for months, at a time, and might be absent from the city for two or three weeks.
- Q. 62. He was in and out of the shop during 1911 and 1912, quite frequently? A. Yes, sir.
- Q. 63. What were Mr. Bole's labors at the place of business of the Wilson & Willard Manufacturing Company during 1911 and 1912?
 - A. He would come when he wanted to and went

(Deposition of Arthur G. Willard.) when he wanted to.

- Q. 64. What part of the premises did he frequent during those years?
 - A. He had access to the whole shop.
 - Q. 65. How about the office?
- A. He had access to the office; the records and everything were kept in there.
- Q. 66. He was on a friendly basis with everyone in the shop, or at least in the control and management of the shop, during 1911 and 1912?
 - A. With the management, yes.
- Q. 67. Was taken into the confidence of yourself and Mr. Wilson, Mr. E. C. Wilson and Mr. W. W. Wilson, during those years, was he not?
- A. He was never barred from any discussion of any new inventions; I don't know as he was taken into the confidence of the management of the shop.
- Q. 68. Is it true you conferred with him and talked things over with him just as though he was kind of a shop brother?

Mr. LYON.—Objected to as leading. A. Sure.

- Q. 69. (By Mr. BLAKESLEE.) When, to your knowledge, was the first Wilson under-reamer made? [276—218]
- A. Manufactured at the Baker Iron Works long years ago.
 - Q. 70. About how early?
- A. I should say in 1904 or 1905 or 1906; somewhere along there.
- Q. 71. Where were these reamers next manufactured?

- A. Bakersfield Iron Works, Bakersfield, Cal.
- Q. 72. Where after that?
- A. Wilson & Willard Manufacturing Company, Los Angeles, California.
- Q. 73. Please look around the room and see if you see any under-reamers here which are properly described as Wilson under-reamers as you have testified generally.
 - A. There appears to be several of them on the floor.
 - Q. 74. Point out one of them, please.
 - A. (Witness indicates.)
- Mr. BLAKESLEE.—The witness indicates Wilson Exhibit; Wilson Under-reamer No. 255.
- Q. 75. Are you acquainted with the construction of that reamer you have just pointed out, both interior and as appears outside? A. Yes, sir.
- Q. 76. How many such reamers approximately have you seen manufactured? That is, of the type before you.
 - A. I suppose two or three hundred.
- Q. 77. Since the commencement of the manufacture of the Wilson under-reamer at the Baker Iron Works, have there been any particular changes in the design and construction of the same, and if so, please briefly indicate what those changes have been.
- A. The present type of under-reamer is altogether different from the original Wilson under-reamer. It would be rather difficult to explain just what changes have taken place.
- Q. 78. In the type of under-reamer before you now, and under discussion, are there any general

features present which were not [277—219] in the earlier under-reamers, and if so, what?

- A. It is known as the slotted tee bar type.
- Q. 79. What is the slotted tee bar provided for?
- A. To pass on either side of a stationary key.
- Q. 80. What is the purpose of the key?
- A. To hold the spring and tee bar in place.
- Q. 81. Was there ever anything else used in the Wilson under-reamer for holding the spring at the lower end?
- A. There was screws and blocks, in one type, and pins and blocks in another type, a 2-piece key in another type.
- Q. 82. Are those the only means—Do you remember any further means for holding the spring in the Wilson under-reamer at the lower end?
 - A. No, sir.
- Q. 83. I show you two blue-print photographs, with the titles on the back obscured, and ask you if you know what they show. Just keep the titles obscured.
 - A. Show the type of the 2-piece key.
- Q. 84. Have you ever seen any under-reamer constructed as portrayed in these photographs?
 - A. Yes, sir.
 - Q. 85. What was the name of the under-reamer?
 - A. The Wilson under-reamer.
 - Q. 86. Where were they made?
- A. Bakersfield Iron Works, Bakersfield, California, and Wilson & Willard Manufacturing Company, Los Angeles, California.

Mr. BLAKESLEE.—It may be noted that the witness has just been referring to "Wilson Exhibit Photo 'B' of Wilson Reamer, 2-piece Key Device," and "Wilson Exhibit Photo 'A' of Wilson Reamer 2-piece Key Device."

- Q. 87. How many Wilson under-reamers having this 2-piece key [278—220] device, approximately, have you seen?
 - A. Oh, a hundred or more, I guess.
- Q. 88. When, so far as you know, was the last such 2-piece key Wilson under-reamer made?
- A. I could not say within a year or two; possibly 1909 or 1910.
- Q. 89. Aside from changing the nature of the device for holding the lower end of the spring in the Wilson under-reamer, can you specify any other particular changes that have been made in the construction and combination of parts in the Wilson underreamer?
- A. Do you refer to the shape of the body or the cutters?
- Q. 90. Any material or particular change made in the construction of the under-reamer.

Mr. LYON.—Objected to as calling for a conclusion of the witness. The witness may or may not consider a given change a material one.

Mr. BLAKESLEE.—The witness has testified he is a machinist and has been manufacturing oil well tools for a number of years.

Mr. LYON.—If it be sought to show anything of the history of the Wilson under-reamer, the facts

should be shown and not the conclusion of the witness as to whether the changes were or were not material, and it is not the subject of expert testimony.

A. To the best of my recollection the Wilson & Willard Manufacturing Company made the Wilson under-reamer with 2-piece keys during 1907 and 1908, and from 1909 to 1910 they used screws and a block; and from 1911 up to the present time they used a single-piece key.

Q. 91. (By Mr. BLAKESLEE.) Do you remember any other changes made in the Wilson under-reamer during the years you have just mentioned, in its construction?

A. Part of the time they used the bottom bolt and part of the time we did not. [279—221]

Q. 92. Anything else?

A. Used an old type tee bar, then a slotted, then the solid, then went back to the slotted.

Q. 93. That was in connection with the 2-piece block and screws and the 1-piece key; is that correct?

A. Yes, sir.

Q. 94. When, as near as you can recollect, did the Wilson & Willard Manufacturing Company first commence to make the Wilson under-reamers with the 1-piece key for holding the bottom of the spring?

A. By referring to the shop orders it was February, 1911.

Q. 95. Do you recollect the manufacture of the first reamer containing such single-piece key?

A. I don't remember the number of it. It was sold to the Norbeck-Nicholson Company.

- Q. 96. As near as you can recollect, about when was work started on this first reamer with the single-piece key, the first Wilson reamer?
 - A. February, 1911.
- Q. 97. Do you remember whether you saw the order for that reamer when it was placed in the shop? A. Yes, sir.
- Q. 98. Do you believe you would be able to recognize it if you saw it now? A. I think so.
- Q. 99. I show you a bunch of slips connected together, keeping the title on the back obscured, and ask you if you know what they are.
- A. It was a shop order for changing an 8-inch reamer, No. 120; one of them is the shop order for machining one special 8-inch slotted tee, and one is a sketch of a slotted tee bar; the others [280—222] are time cards handed in by the men.
- Q. 100. Do you remember anything about the making up of the bars specified in these slips?
 - A. I remember it was ordered by Mr. Wilson.
- Q. 101. Do you remember anything connected with the work on the same in the shop?
- A. It was forged and machined as directed by Mr. Wilson, as ordered by Mr. Wilson.
- Q. 102. Who was the foreman at the time in the shop? A. W. G. Knapp.
- Q. 103. Were you present in the shop during the manufacture of these bars? A. Yes, sir.
- Q. 104. Do you remember whether you saw, or not, this reamer, No. 120, when it was changed over, as instructed in connection with these slips?

Mr. LYON.—Objected to as leading and calling for a conclusion of the witness, and assuming facts not appearing from the testimony.

Mr. BLAKESLEE.—Strike the question out.

Q. 105. Do you remember whether the work called for by these slips was executed?

Mr. LYON.—Objected to as incompetent, calling for a conclusion of the witness, not being a statement of fact, and leading.

A. The tee bar was forged and machined as ordered.

Q. 106. (By Mr. BLAKESLEE.) How about the special springs?

A. It would be necessary to make a special spring as the tee bar was extra large.

Q. 107. Is that all these slips call for, a key, etc.? Do you know what that means? (Indicating.)

A. It means the key that holds the spring and tee bar in place.

Q. 108. What did such key have to do with such reamer No. 120? [281—223]

A. It was the key sent with that reamer.

Q. 109. That is the first reamer you remember having such key? A. Yes, sir.

Q. 110. And it went to Norbeck-Nicholson Company?

A. Shipped to Norbeck-Nicholson Company, yes, sir.

Q. 111. As to the extra heavy slotted tee called for by these slips of papers, do you know when the first such slotted tee was made in that shop as called for here?

- A. During January or February, 1911.
- Q. 112. What kinds of things were used in connection with such extra heavy slotted tees for holding the lower end of the spring in the Wilson underreamer? A. Keys.
 - Q. 113. What kind of keys?
- A. Heretofore they would always use a 2-piece key, but on this particular reamer they used a 1-piece key.
- Q. 114. And after that, and in the succeeding manufacture of the Wilson under-reamers, what was used?
- A. From that date on they used the single-piece key.
- Q. 115. Was any other kind of key ever used with such extra heavy slotted tees after that?
 - A. No, sir.
- Q. 116. Please compare the reamer which was made and shipped, as you say, to the Norbeck-Nicholson Company, pursuant to the order given as No. 6904, on these slips of paper, with the Wilson underreamer as exemplified in "Wilson's Exhibit Wilson Under-reamer No. 255." Compare that with this.
 - A. I don't know as I get what you mean.
- Q. 117. Compare that reamer made over and shipped with that one there (indicating). That is, compare reamer 120 as made over and shipped with the "Wilson Exhibit Wilson Under-reamer No. 255." [282—224]

A. It was practically the same reamer, so far as the construction.